# Disordered Eating Among Female Collegiate Athletes: Positive Communication Strategies for Coaches

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by
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**Abstract**

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Positive Communication Strategies for Coaches
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The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.
2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

Coaches, athletics administrators, and sports professionals were notified of the research study via the researcher's own professional network, LinkedIn, Facebook, and Twitter. These contacts were asked to forward the information to their athletes; those who wished to participate in the study contacted the researcher directly. The participants included nine current and two former student-athletes for a total of 11

female collegiate athletes across eight different sports representing all three NCAA divisions.

The interviews lasted between 40 and 60 minutes in length and were conducted by the same researcher. The qualitative data gathered from these interviews were fully transcribed and then reviewed by the researcher. Transcript analysis involved placing responses into categories through the three phases of coding as defined by grounded theory research: open, axial, and selective. Because the interview questions were divided into verbal and non-verbal coach communications, the data analysis from the interviews provided the researcher with the necessary information to achieve the purpose of the study.

A result of the findings is best described by the central theme of *strength* which links two critical areas developed from the interview data: *Coach-Athlete Relationship* and *Athlete Eating Habits & Physique*. The theory developed through the study's grounded theory approach is as follows:

1. A *strong*, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.
2. Once such a relationship is established, both verbal and non-verbal coach communications regarding athlete eating habits or physique should focus on *strength*.

## Acknowledgements

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A special thanks goes to the coaches who forwarded my communication to their athletes. Without them, I would have had no participants. And without the participants, I would have had no results! I am therefore extremely grateful to my participants who not only showed an interest in my study, but who spent nearly an hour with me in person or on the phone sharing intimate stories and providing me with the results I had hoped to achieve.

I would also like to thank Dr. Robin Lynk who helped me unravel my thesis topic by listening to my ideas and discussing possible research paths.

Finally, I would like to thank my brother, father, and mother for their endless support, not only during this time but throughout my entire life. I am grateful for their interest in my endeavors and commitment to my happiness. I owe an enormous thank-

you to my brother who spent hours proofreading and editing several rough drafts of this thesis with an amazingly keen, critical, and helpful eye.

## Dedication

The completion of this thesis project would not have been possible without those mentioned above in the acknowledgements. However, one person in particular was my constant cheerleader, my permanent shoulder to lean on, and an endless means of support. He listened to my daily challenges and achievements throughout the project, he supplied me with tissues, hugs, and encouragement when I needed it most, and he showed a true interest in my work.

I therefore dedicate my thesis project to my witness and partner in life, my husband Mathew Sandler.

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# Chapter 1

## Introduction

Eating disorders, from a clinical perspective, include anorexia nervosa, bulimia nervosa and binge-eating. These serious conditions affect both men and women and are characterized by a "refusal to eat, self-induced vomiting, [and] eating to the point of discomfort," respectively, among many other debilitating symptoms (Eating Disorders, 2013). Disordered eating behaviors, while more common and less serious than a "true eating disorder," include many of the same symptoms, but to a lesser degree (McQuillan, 2008). For the purpose of this study, both conditions were taken into account and will be referred to as disordered eating (DE).

While athletes are more likely to suffer from disordered eating than non-athletes, female athletes are at an even higher risk than male athletes (Govero, 2003; Greenleaf, Petrie, Carter, & Reel, 2009). Moreover, the college setting places additional emphasis on such behaviors. In the transition from high school to college, student-athletes face increased stress and anxiety, perceived loss of social support, and increased academic demands. In a survey of 204 female NCAA Division I athletes, about half reported being dissatisfied with their weight and thus wanted to lose an average of 14 pounds, and several participants indicated that they had been previously diagnosed with a clinical eating disorder (Greenleaf et al., 2009). This is just one example of the prevalence of disordered eating in athletics and the attitudes and behaviors that can lead to its development.

With regard to the type of sport and prevalence of eating disorders, the research contradicts itself when determining if sport type is a predictor of eating disorders. Even

though Glover (2006), Govero (2003), and Hornak & Hornak (1997) all concluded that athletes of endurance sports and sports that place an emphasis on aesthetics (e.g., cross country and gymnastics) are at a higher risk for developing eating disorders, Coker (2011), Greenleaf et al. (2009), and Griffin & Harris (1996) found that type of sport was not a factor. Underreporting, one of the main limitations in the literature on disordered eating, may have led to these different findings. Often, troubled athletes do not wish to reveal the truth for fear of losing a spot on the team or not living up to the coach's ideal (Coker, 2011).

**Need for the Study**

Of main concern is how to manage and ultimately prevent the crisis of disordered eating among female collegiate athletes, the population at highest risk for eating disorders (Glover, 2006; Greenleaf et al., 2009; Hornak & Hornak, 1997; Thompson & Sherman, 1999). There are opportunities to fill the gaps of prior research in these areas, especially with regard to the influence of the coach. Much of the research shows that coaches may precipitate an eating disorder or exacerbate an existing one (Sherman, Thompson, DeHass, & Wilfert, 2005). Various studies have explored the influence of the coach when it comes to disordered eating, recommending that coaches "be aware of the influence their advice and comments can have on the dieting practices of their athletes and be careful of what their recommendations might initiate" (Govero, 2003, p. 53). In addition, Coker (2011) focused on the positive correlation between a coach's pressure and an athlete's disordered eating, and found that coach communication about highly sensitive issues such as disordered eating has a substantial impact on athletes, given the strength of the coach-athlete relationship.

Furthermore, “previous research has indicated that the coach is a contributing factor in the development and exacerbation of disordered eating behaviors” (Coker, 2011, p. 94). However, research has yet to show effective methods for coaches to employ with regard to disordered eating. The coach’s role and potential for positive influence thus warrants further exploration.

There are numerous publications on the detrimental influence that coaches have on their athletes with regard to eating behaviors, and most articles have suggested coaches’ education as a means of alleviating the problem. However, such studies present a limitation because even though they express a need for coaches’ education on disordered eating – and even though coaches’ knowledge on the subject has risen (Glover, 2006; Govero, 2003) – prevalence of disordered eating has not decreased (Greenleaf et al., 2009). When searching for ways to identify, manage, and prevent eating disorders, most studies available are those that conclude that more coaches’ education is needed. However, coaches’ education has yet to be shown as an effective measure for managing disordered eating (in fact, several studies suggested analyzing the effectiveness as future research opportunities). This research gap also indicates a need for alternative methods to manage and ultimately prevent disordered eating, especially through athlete feedback as opposed to that of coaches, the population which the majority of studies used in their sample (Glover, 2006; Govero, 2003; Griffin & Harris, 1996; Heffner, Ogles, Gold, Marsden, & Johnson, 2003; Sherman et al., 2005; Turk, Prentice, Chappell, & Shields, 1999).

Moreover, since it is uncertain whether type of sport is a predictor of disordered eating, “researchers and college health professionals need to widen their view of which

athletes are at risk. A failure to do so may lead to some athletes being overlooked and thus not receiving needed assistance" (Greenleaf et al., 2009, p. 492). Consequently, there exists a need to include a variety of sports in future studies on disordered eating.

**Purpose of the Study**

The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.
2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

**Research Questions**

With the prevalence and severity of untreated disordered eating in mind, combined with the fact that positive coaches' behaviors have yet to be identified, the following research questions were proposed:

1. What do female collegiate athletes believe are helpful verbal communications from their coaches with regard to disordered eating?

2. What do female collegiate athletes believe are helpful non-verbal communications from their coaches with regard to disordered eating?
3. Do the athletes' responses differ by type of sport?

**Limitations**

The following limitations were present in this study:

1. Because some athletes may not have revealed if they had an eating disorder, underreporting is a limitation of this study and a common one among research on disordered eating behaviors.
2. Honesty and spontaneity in responses could not be measured in this study.
3. This study was unable to control for confounding variables (e.g., media, parents, peers) due to the nature of a non-experimental research design.
4. Recall bias is a limitation for those interviewees who were no longer current student-athletes.

**Delimitations**

The following delimitations were present in this study:

1. The number of athletes interviewed may not represent all NCAA divisions or sports, or be proportioned appropriately.
2. Participants are current or former collegiate females. While the researcher realizes that men also suffer from disordered eating, females were chosen as the population of study to (1) focus on the population at highest risk of eating disorders, to (2) narrow the researcher's focus, and to (3) conduct research that directly relates to the researcher's personal interests, experiences, and career

goals. Moreover, in her discussion of future research implications, the researcher recommended this same analysis be conducted with males.

3. Participation in the study was voluntary.
4. The results of this study cannot be generalized to other populations due to the convenience sample and voluntary nature of the study.
5. Participant bias is a delimitation for those who knew the researcher (however, these interviewees were more open with the researcher and shared more stories than those who did not know the researcher).

**Definition of Terms**

Anorexia Nervosa: An eating disorder marked by obsession over weight and food intake, resulting in maintaining a weight that is far below normal through self-starvation and/or excessive exercise (Anorexia Nervosa, 2013).

Athlete: For the purpose of this study, one who currently participates in a NCAA sport, or one who had previously participated in a NCAA sport.

Binge-Eating Disorders: An eating disorder in which affected individuals feel and act upon an urge to consume unusually large amounts of food, usually in secret (Binge Eating Disorder, 2013).

Body Image: The perception a person has of how their body appears to others (Body Image, 2013).

Bulimia Nervosa: An eating disorder in which affected individuals secretly binge and then purge, in order to get rid of extra calories. Examples of bulimic behaviors include forced vomiting or excessive exercise (Bulimia Nervosa, 2013).

Clinical Eating Disorder: Any one of the following eating disorders: anorexia nervosa, bulimia nervosa or binge-eating disorder (Eating Disorder, 2013).

Coach: For the purpose of this study, one who holds the highest position of leadership on a NCAA sports team and who instructs and trains the athletes.

Disordered Eating (DE): For the purpose of this study, a term referring to both clinical eating disorders as well as disordered eating behaviors. Coker (2011) asserted that "all eating disorders require disordered eating behaviors, but individuals exhibiting disordered eating behaviors do not necessarily meet diagnostic criteria for a clinical eating disorder" (as cited in Thompson & Sherman, 2010). Therefore, the term "eating disorder" alone does not describe the entire population of interest.

Disordered Eating Behavior: An eating behavior that is more common and less serious than a clinical eating disorder, but includes many of the same symptoms to a lesser degree (McQuillan, 2008).

National Association of Intercollegiate Athletics (NAIA): The athletic association that organizes college and university-level athletics programs among smaller colleges and universities across the United States (as compared to the NCAA). Their motto is "character-driven intercollegiate athletics" (NAIA, 2013).

National Collegiate Athletic Association (NCAA): The national organization that governs and promotes intercollegiate athletics in the United States. The NCAA is comprised of three membership classifications: Divisions I, II, and III. Every athletic program in the NCAA must affiliate its core program with one of these three divisions (NCAA, 2013).

NCAA Division I: Institutions in the NCAA that "offer the greatest number of sports for the largest number of participants" and represent the highest level of competition. Division I institutions are able to offer athletic scholarships (Sports Scholarship, 2013).

NCAA Division II: Institutions in the NCAA that offer fewer sports, compete at an intermediate level of competition, and offer fewer athletic scholarships than Division I schools (Sports Scholarship, 2013).

NCAA Division III: Institutions in the NCAA that offer fewer sports and are less competitive than those in Division II. Division III athletics are prohibited from offering athletic scholarships (Sports Scholarship, 2013).

Strength (mental): For the purpose of this study, mental strength refers to the positive, cogent relationship bond between an athlete and a coach.

Strength (physical): For the purpose of this study, physical strength refers to positive health and power of the body.

Subclinical Eating Disorder: The term used to describe those that display disordered eating behaviors.

Symptomatic Athlete: An athlete who displays symptoms of eating disorders but is not officially diagnosed with one (Greenleaf et al., 2009).

# Chapter 2

## Review of Literature

The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

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The review of literature is divided into the following three sections: (1) the coach's influence, (2) the education of coaches related to disordered eating, and (3) the prevalence of disordered eating in athletics. This structure aids in the understanding of relevant research and its relationship to the purpose of this study. Furthermore, limitations and deficiencies in the current literature also demonstrate a need for this study. While there is an abundance of research on the deleterious influence of coaches and the subsequent need to increase their education regarding disordered eating, researchers have yet to study the athletes' needs and what they view as positive coach

behavior. The latter, which this study intended to reveal, will enable coaches to know how to better manage disordered eating among their athletes.

**The Coach's Influence**

Published articles and research on the positive influence of coaches with regard to disordered eating are virtually non-existent. Most of the literature in this area discusses negative coach behaviors, focusing on what coaches do wrong and how they can even exacerbate an eating disorder. While this is an unfortunate situation for coaches and their athletes, it does provide additional support concerning the need for this study.

A thesis written in 2011 – *Coach pressure and disordered eating in female collegiate athletes: Is the coach-athlete relationship a mediating variable?* – synthesized a variety of articles on the potential (and actual) detrimental influence of coaches on their athletes regarding disordered eating (Coker, 2011). It stimulated a search for more articles on the topic, and while many were found, none were discovered that explored a coach's positive influence.

According to Coker (2011), "research has long identified the coach as a causal or contributing factor in the development of disordered eating and or eating disorders in athletes" (p. 38). The portal through which this occurs is "overconformity to the sport ethic, [namely] that athletes should: (a) sacrifice for the game, (b) strive for distinction, (c) accept risks and play through pain, and (d) refuse to accept limits in the pursuit of possibilities" (as cited in Coakley, 2009; Hughes & Coakley, 1991). This overconformity leads to feeling pressure to perform well under the coach.

Contributing factors to disordered eating behaviors that involved the coach include athletic personnel making a remark regarding a need to lose weight, required and public weigh-ins, perceived requirement to lose weight to meet the coach's ideal, and the fear that not losing weight would jeopardize the athlete's participation on the team. These factors were also explored in other research studies, which will be reviewed in this section.

To understand the role of the coach-athlete relationship with regard to weight concerns and disordered eating behavior, and to understand the influence of the coach on the development of such behavior, Coker (2011) surveyed 15 coaches and 248 athletes in NCAA Division I using three tests: CART-Q (Coach-Athlete Relationship Questionnaire), EAT-26 (Eating Attitudes Test), and WPS-F (Weight Pressures in Sport for Females Questionnaire). The limitations of her study included underreporting, self-report bias, selection bias due to the voluntary nature of responses, and the inability to control for confounding variables since it was a non-experimental study.

Results showed that coach pressure is a contributing factor to disordered eating among athletes. Of the 248 athletes, 14 were underweight, 22 were overweight, and 2 were obese; 13.3% exhibited disordered eating behaviors and 4.3% scored greater than a 20 on EAT-26, indicating a possible eating disorder (but this figure may be higher due to underreporting). "When asked if they had experienced coach pressure to lose weight or maintain a low body weight, 49 athletes (20.5%) responded affirmatively" and according to the WPS-F test, nearly 11% of those athletes reported receiving weight-related pressure often (Coker, 2011, p. 61).

The next several articles in this review confirm Coker's (2011) assertion that a coach's influence can have a detrimental effect on an athlete's body image. Hornak & Hornak (1997) concluded that weight loss can be attributed to a casual remark by a coach, and asserted that "the monitoring and caretaking that some teammates (and coaches) would take on are not helpful to the eating disordered individual" (p. 37), yet they did not research findings to include what *is* helpful.

As several of these studies have stated, "coaches have significant power and influence with their athletes that can have unanticipated negative consequences if dieting attempts and weight loss are encouraged" (Thompson & Sherman, 1999, p. 327). Thompson & Sherman (1999) then cited several poor behaviors displayed by coaches, including public posting of team member's weights and pinching the athlete's body. Greenleaf et al. (2009) listed weigh-ins, revealing athletic attire, and additional workouts as forms of heightening coach pressure. Reel & Galli (2006) also commented on mandatory weigh-ins, public humiliation, and pressure to gain or lose weight. They also cited a 2004 incident in which a former basketball player, after having developed an eating disorder, successfully sued her coach for demanding that she lose weight. A stated purpose of her suit was to highlight the power coaches have over their athletes.

What has yet to be understood, however, is if coaches have so much power and influence over athletes, why do they not know what comments and actions their athletes prefer? Thompson & Sherman (1999) did, however, mention that performance can also be enhanced by working with the athlete psychologically. "Coaches and athletes often speak of 'playing with emotion,' being 'mentally tough,' 'eliminating mental mistakes,' 'reaching one's potential,' and 'handling pressure'" (Thompson & Sherman, 1999, p.

149). However, this article did not specify comments and actions for the coach to provide in order to achieve these ideals. Therefore, further understanding of an athlete's mind and preferences warrants additional research.

Glover (2006) also commented on the substantial influence coaches have on athletes. She explained that this influence places coaches in a position to play a primary role in the prevention and management of eating disorders. "Athletes who are predisposed to developing an eating disorder may take comments from coaches more personally and seriously because of a greater need for the coach's approval" (Glover, 2006, p. 8). If athletes take coaches' comments so seriously, further research is needed to identify helpful comments and actions that coaches can display. Unfortunately, the current literature shows only negative coach behavior:

> Coaches may make joking comments about an athlete's weight, place demands on athletes regarding body weight limits or promote unhealthy methods to improve athletic performance and if these coaches frequent autocratic behaviors they are further hurting a vulnerable athlete by intensifying pressures for success and acceptance. (Glover, 2006, p. 96)

While Glover (2006) also concluded that women process unpleasant words regarding body image more emotionally than men, she did not define what a "pleasant" word constitutes. If Glover's (2006) theory is that unpleasant words lead to disordered eating, then one may be able to deduce that pleasant words should not.

"Coaches have most often been associated with precipitating disordered eating in an athlete or exacerbating an existing eating disorder in an athlete through their training practices and recommendations" (Sherman et al., 2005, p. 448). Sherman et al.

(2005) conducted a study of 2,894 NCAA coaches across 23 sports from all three divisions. These authors assessed how female athletes with disordered eating are identified, how coaches are involved, and how symptomatic athletes are managed, as well as provided implications for coaches' education. A 31-item questionnaire was designed by the authors and included questions on attitudes, beliefs, and behaviors of coaches with regard to disordered eating behaviors. High-risk sports, such as cross country and gymnastics which emphasize thinness, and low-risk sports were divided. Limitations included over-representation of female coaches, honest reporting, and generalizability of the results.

Results showed no significant differences among NCAA division. Coaches rated the seriousness of several disordered eating behaviors, and all but binge eating were rated by coaches as more serious. The study did not, however, survey athletes. Therefore, we do not know if athletes would agree with this same rating.

Coaches were less aware of disordered eating in low-risk sports, yet suffering athletes in those sports still need attention.

The vast majority of coaches (92%) referred symptomatic athletes to at least one health professional and was satisfied with the services provided. However, without a study involving athlete preferences, one cannot be certain that referral to a professional was what the athlete wanted or if the athlete was also satisfied with the care.

In two hypothetical situations in which an eating disordered athlete was identified, 44% of coaches stated that they would first talk with the athlete, 31.5% would first speak to the athletic trainer, and 14.2% would watch the athlete closely (Sherman &

Thompson, 2005). However, neither the athlete's response to these measures nor the athlete's preferred course of action is known from these results.

While Sherman & Thompson (2005) showed that coaches do not want their athletes to under-eat, there is still an existing notion that coaches do want their athletes to eat less or lose body weight in an attempt to perform better (Sherman & Thompson, 2005). Further research is needed to identify what coaches should say and do to provide their athletes with the correct impression.

Finally, teammates and athletic trainers were found to play more of a role than coaches in identifying symptomatic athletes, but, as noted above, it has yet to be discovered with whom the athlete wishes to collaborate.

Another survey of coaches showed the various negative effects that coaches have on their athletes through their actions and coaching methods. Heffner et al. (2003) surveyed 303 coaches (47% male / 51% female) in six sports across all NCAA divisions. Only coaches of women's sports were selected due to the higher prevalence of disordered eating among female athletes. Results were analyzed by gender of coach, by NCAA division, and by sport. The survey included demographics, coaching behaviors, availability of prevention services for athletes, awareness of health issues, and attitudes toward eating and weight.

Nearly half the coaches reported having an athlete with an eating disorder and a substantial number of participants in the study engaged in some form of weight management: 44% of coaches weighed their athletes, 44% assessed body weight composition, and 30% suggested athletes limit food intake. Moreover, the study

concluded, “some of their coaching attitudes and behaviors may inadvertently increase the risk for disturbed eating” (Heffner et al., 2003, p. 209).

Division I (DI) coaches responded remarkably different than Division II, Division III, and NAIA coaches. The former were engaged in more monitoring behaviors and had a higher incidence of disordered eating on their teams; 18% more DI coaches kept track of weight than in other divisions and 29% more DI coaches assessed body fat composition. Despite the conflicting research on the prevalence of eating disorders by body type, gymnastics coaches responded differently than other coaches; they were more engaged in monitoring and weight management behavior, had more precautionary measures in place, and reported more eating and weight-related problems. In addition, gymnastics coaches encouraged weight loss through extra workouts twice as frequently as coaches in other sports. While this study showed the potential detrimental effects of coaches’ behavior – especially among Division I and gymnastics coaches – it, like the other studies discussed above, did not provide information on helpful or positive coaches’ behaviors.

The studies explored thus far have only focused on negative coach behavior because that is all that seems to exist in the literature. The way in which the survey questions are worded, in fact, may play a role in the type of results received. For example, Jowett & Cramer (2010) used QRI: Quality Relationship Inventory to assess the quality of different types of personal and social relationships. They asked questions such as “how often do you need to work hard to avoid conflict with your coach/parent?” These questions are geared towards finding out what coaches do wrong, but not what coaches do right. Therefore, the results of this study were not surprising: the athletes’

perception of their bodies was significantly predicted by the relationships with their coach. Since this study was more about relationships with coaches and less about effective tangible words and actions that coaches can use, further research is needed to explore what specifically defines a positive relationship. While Jowett & Cramer (2010) recommended transmitting positive feedback to athletes, stating that meaningful and supportive relationships with coaches can make a positive contribution to how young athletes feel about their physical self, they did not mention what constitutes such feedback or relationships.

The final study reviewed in this section is one of interpretive biography, or a "sense making story" (Jones, Glintmeyer, & McKenzie, 2005). Using this "inside-out" approach, one can thoroughly understand an athlete's sensibilities and personal feelings. Jones et al. (2005) tell the story of an elite swimmer "Anne" whose career was at first interrupted – and then finally ended – by disordered eating. It shows that pressure from coaches can influence the onset of eating disorders. Meetings with Anne were audiotaped and transcribed, and discussion included Anne's initial involvement in sports, development as an elite athlete, relationships with coaches, what she thought triggered her bulimia, and consequences.

Similar to Coker's (2011) definition of overconformity, Anne stressed the importance and influence of her "strong athlete identity, [which involved] consideration of the body as a biological object to be unproblematically trained, manipulated, and measured" (Jones et al., 2005, p. 378). Anne reported a pressure to "conform" to an ideal slim body, and that "expert" coaches are the means to which an athlete uses to

attain it. This story revealed, by specific example, the severe effects of power-dominated and problematic relationships with coaches.

When Anne first met her coach, she took an instant liking to him. She reported that her "athletic identity received a substantial boost," that she loved his energy and enthusiasm and wanted to perform well for him, even though he put pressure on her and her teammates. "Anne's identity as a swimmer and self-esteem within the athletic role became bound to her coach's perception of her performance" (Jones et al., 2005, p. 383). She stated that she became "bound to his methods and views," and she mentioned that she had no alternative. Retrospectively, one cannot help but wonder what those alternatives could have been.

"Her coach's enthusiasm and persona infected her…he was her role model, an expert, someone she wanted to listen to and learn from, someone she believed in and wanted to please" (Jones et al., 2005, p. 384). Due to feelings of both admiration for and pressure from her coach, it could have been difficult for Anne to separate constructive advice from destructive.

At a culminating meeting with her coach and parents, her coach said, "It would probably be more beneficial if you were lighter and slimmer and could lose a bit of weight and maybe you should look at dieting a bit more" (Jones et al., 2005, p. 384). This comment "shot everything good he had to say out of the air." Doubts raced through Anne's head, her confidence was destroyed, and she was utterly embarrassed. She began to regulate her caloric intake which turned into purging, starvation, and ultimately bulimia, which she suffered from into adulthood (Jones et al., 2005).

This is just one indication that a coach has a lot more to do than learn about eating disorders from a textbook or lecture, as suggested in the following section. In order to prevent life-damaging scenarios like the one described by Anne, coaches must acquire a specific type of knowledge – that of positive behavior that their athletes want to experience. Instead of making comments regarding weight management and food intake, coaches should learn different communications that deliver the same message (e.g., to improve performance) but with a much less detrimental side effect.

The research explored in this section makes it apparent that coaches can negatively influence the actions of their athletes. However, *positive* influence has yet to be explored. While Coker (2011) stressed that coaches should be aware of the potential lasting effects of a weight-related comment, she does not suggest the "right" thing to say:

> Athletes who hear comments from their coaches, as well as perceive that the coach's ideal is to be leaner, thus requiring weight loss, are more likely to develop disordered eating behaviors than athletes who do not hear those comments or perceive such an ideal. (Coker, 2011, p. 5)

In fact, Glover (2006) suggests "simply modifying the language they [coaches] use with female athletes can have a positive effect" (Glover, 2006, p. 38).

According to the literature, there is perhaps no one other than the coach who holds such power to influence athletes' thoughts and behaviors. As recommended by Reel & Galli (2006), it would seem wise, therefore, to use this power as a means of promotion and positive outcomes.

**Education of Coaches Related to Disordered Eating**

In response to the literature on coaches' negative influence on athletes, several studies tested the coach's knowledge of eating disorders. These studies concluded that there was a need for increased education in the area of eating disorders, as a means to alleviate the problem of disordered eating.

The primary article written on the education of coaches related to disordered eating assessed collegiate coaches' knowledge of eating disorders and evaluated their confidence in such knowledge. Turk et al. (1999) designed a two-part questionnaire that was evaluated by eleven experts and used in a pilot study, and later utilized by Govero (2003) and Glover (2006). The study included NCAA Division I-A coaches from five major-conference universities. However, selection bias exists since the choice of these universities for the study was based on a convenience sample and was limited to two conferences. Even so, with a response rate of more than half (53.5%) and several citations in other major works in the field of disordered eating, this article – *Collegiate Coaches' Knowledge of Eating Disorders* – is a seminal piece in the literature.

The authors concluded that "education is a primary tool for minimizing the risk of eating disorders" (Turk, et al., 1999, p. 21) and that coaches should participate in educational programs. Only 27% of the coaches in this sample had attended an eating disorder educational program. However, this figure (from 1999) was lower than both that of Govero (2003) and Glover (2006), both of whom found that 67% of coaches had attended an eating disorder educational program. Moreover, Sherman et al. (2005) reported that only 6% of coaches did not have any training on disordered eating. These

three studies – which took place at least four years after that of Turk et al. (1999) – prove that coaches' education was on the rise.

Through analysis of the knowledge section of the Turk et al. (1999) questionnaire, only 4.3% of coaches scored a 90% correct or greater while the majority (31.9%) scored between 70-79.5% and 29.7% scored between 80-89.5%. In sum, 65.9% of coaches answered at least 70% of the questions correctly. In contrast, and with the same survey, both Govero (2003) and Glover (2006) showed that more coaches (90% and 86% respectively) scored higher than 70% correctly on the knowledge section.

In the education and prevention section of the questionnaire, coaches were most confident about their incorrect answers. This finding posed a threat since it implied that coaches may have provided incorrect information to their athletes. However, the validity of this finding was questioned by Govero (2003) and Glover (2006) who concluded that coaches were much more confident in their correct answers than in their incorrect answers. This contradiction warrants further exploration and a need to determine the strength of Turk et al.'s (1999) recommendation to increase education and awareness of eating disorders among coaches.

Govero (2003) used the questionnaire designed by Turk et al. (1999) four years later. However, she only surveyed cross country coaches of female athletes, whereas Turk et al. (1999) did not differentiate between the athlete's gender or sport. While Govero (2003) showed an increase in coaches' education on disordered eating, one must be cautious when drawing conclusions from this study alone since it only focused on coaches of one sport and of one gender. Glover (2006) showed that coaches of

females are more knowledgeable about certain aspects of eating disorders such as etiology and risk factors than coaches of male athletes. Moreover, most responses in Turk et al. (1999) came from assistant coaches, whereas Govero (2003) included mostly head coaches. With regard to the gender of the coach, however, both Turk et al. (1999) and Govero (2003) found a disparity between male and female coaches (both surveyed close to 70% males). Therefore, both studies included a population in which the majority of respondents (males) have been shown to possess less knowledge than their female counterparts, yet Govero (2003) showed more knowledge overall. Both studies (Govero, 2003 and Turk et al., 1999) also focused solely on NCAA Division I athletics.

Despite the limitations of the Govero (2003) study, another piece of literature also used the Turk et al. (1999) questionnaire to assess coaches' knowledge of disordered eating, their confidence levels, and availability of educational resources. While this dissertation, entitled *Collegiate Coaches' Perceived Leader Behaviors and Knowledge of Eating Disorders,* also focused solely on Division I athletics, it included coaches of more sports, including gymnastics, cheerleading, swimming, cross country, track & field, tennis, and volleyball (Glover, 2006).

As in Turk et al. (1999) and in Govero (2003), Glover (2006) also concluded that coaches' education is integral to the prevention and management of eating disorders, even though coaches answered the most questions correctly with regard to risk factors and identification of signs and symptoms. The suggestion of these three studies – Turk et al. (1999), Govero (2003), and Glover (2006) – to increase a coach's education on disordered eating has been supported, yet the type of education has yet to be explored

in detail. There has been little to no research to date that examines a coach's education via what the athletes' response is to the coaching they receive.

A unique objective of Glover (2006), as compared to Turk et al. (1999) and Govero (2003), was to also measure a coach's perception of his/her leadership behaviors, including that of "Positive Feedback" (which was determined by the "Leadership Scale for Sports"). Coaches scored the highest on the perception scale (i.e., that they display this type of positive behavior very often). However, no research was conducted to conclude whether the athletes would agree with this assumption.

Still more literature exists that stresses the importance of coaches' education on disordered eating. Hornak & Hornak (1997) claimed that coaches are not prepared to respond to the needs of eating disordered athletes. They suggested several steps for a coach to take such as scheduling an intervention meeting (a "carefrontation" as with alcoholics), referring the athlete to medical, dietary, and/or psychological resources, avoiding the temptation to assume that the athlete will see the coach as a buddy, mentor, or counselor, and scheduling educational team meetings. However, what this study lacked is the exploration of whether or not athletes agreed with these measures and would be amenable to them. It is not learned from this article how athletes think a coach can best be prepared to respond to their needs.

Thompson & Sherman (1999) also believed that increasing a coach's education would decrease the incidence of disordered eating. They suggested a few prevention measures such as de-emphasizing weight, eliminating group weigh-ins, controlling contagion (athletes copying other athletes), and treating each athlete individually. While they also recommended that a registered dietician provide information to both athletes

and coaches, they did not discuss what athletes would find most helpful or if athletes would even prefer these methods. The authors continued by stating:

> Female college athletes who are engaged in disordered eating or who may have an eating disorder may be more willing to seek or accept assistance from health professionals not directly tied to the athletic department for fear of being punished by their coach or negatively judged by their coaches or teammates. (Thompson & Sherman, 1999, p. 493)

Their research, however, failed to indicate the actual preference of the athlete, asserting only that he/she "may be more willing." However, the authors also discovered that with regard to male coaches, the mere increase of coaches' education is not sufficient. Thompson & Sherman (1999) concluded that male coaches also need to become more sensitive to women's issues. However, often a coach is unaware of an athlete's sensibilities until the athlete communicates them.

The last study with regard to education is about the broader topic of nutrition, rather than a focus on eating disorders. In a survey, which also contained a knowledge component, all three NCAA divisions were accounted for, as well as an equal number of male and female coaches (Shifflett, Timm, & Kahanov, 2002). In this study, coaches reported weighing their athletes more than once a week, taking body fat measures, and suggesting dieting. The study noted that over half the coaches surveyed had intervened in at least one disordered eating case.

According to the literature reviewed thus far, one may conclude that such intervention may exacerbate the athlete's eating disorder due to the coach's lack of knowledge on the subject. On the contrary, Shifflett et al. (2002) stated, "One group

being more knowledgeable than another does not necessarily mean that the better performing group has a good understanding of nutrition" (p. 357). Moreover, the actions of the coach described in this study (e.g., suggesting dieting) could have played a role in the development of disordered eating as well.

After review of this literature, which stressed the importance of coaches' education on disordered eating, the question remains: Is education the answer to prevention and management of disordered eating? The literature proves that knowledge among coaches has increased from 65.9% in 1999 (Turk et al., 1999) to 86% in 2006 (Glover, 2006) among coaches who answered 70% of the same questions correctly. If coaches have such a "high level of knowledge," (Glover, 2006, p. 2), then has the prevalence of eating disorders decreased among athletes?

**Prevalence of Disordered Eating in Athletics**

Three years after Glover's (2006) study, which – along with Govero (2003) – showed that coaches' education on disordered eating had increased, four researchers concluded that "the prevalence of symptomatic athletes [of eating disorders] found in this study…is higher than previous research" (Greenleaf et al., 2009, p. 492). The authors studied 204 female collegiate athletes from three universities across 18 different sports. The limitations of self-reporting and selection bias (NCAA Division I only) infer that prevalence rates could have actually been higher (e.g., some affected athletes may not have reported their true eating behaviors for fear of losing a spot on their team or for being discovered to have a problem). To determine the prevalence of both clinical eating disorders as well as disordered eating behaviors, the authors used the

Questionnaire for Eating Disorder Diagnosis (QEDD) and the Bulimia Test-Revised (BULIT-R).

Results showed that 2% of athletes were eating disordered, 25.5% of them were symptomatic, and 72.5% were asymptomatic. "About half the women (54.4%) reported being dissatisfied with their current weight, and of those women, most (88.2%) believed that they were overweight and reported wanting to lose [it]" (Greenleaf et al., 2009, p. 491). In 1994, prevalence of anorexia nervosa in adolescent and young adult females was between 0.5-1.0% (Thompson & Sherman 1999), but it was as high as 8% (and even as high as 14-19% for those having subclinical symptom levels) 10 years later in Greenleaf et al. (2009). Despite these prevalence rates, Glover (2006) showed that coaches' education on disordered eating had actually increased throughout this same timeframe. Also, one can now question the effectiveness of the prevention measures outlined in Hornak & Hornak (1997) and of Thompson & Sherman (1999) in the "education" section of this literature review. Since being published in 1997 and 1999 respectively, prevalence of disordered eating has not dropped.

Other studies have also shown an increase in prevalence of eating disorders, despite the increase in coaches' knowledge on the subject. "A 1992 study by the NCAA reported that 70% of the responding institutions had at least 1 case of an athlete with an eating disorder. This was a 6% increase over the same study done in 1990" (Turk et al., 1999). Glover (2006) stated that the prevalence of anorexia and bulimia has "notably increased" and "every 1 out of 100 young women between the ages of 10 and 20 are suffering from self-starvation [clinical anorexia], whereas about 4% of college aged women have bulimia nervosa" (Glover, 2006, p. 2). Furthermore, "Research

(CDCP, 1997) has established that eating disorders have reached epidemic levels in the United States and are among the leading causes of death for women" (Glover, 2006, p. 34). Finally, Griffin & Harris (1996) mentioned that disordered eating prevalence may be higher than reported due to underreporting since affected athletes may be less likely to respond truthfully.

Much of the literature – Glover (2006), Greenleaf et al. (2009), Hornak & Hornak (1997), and Thompson & Sherman (1999) – showed that female collegiate athletes are among the highest risk groups for disordered eating behaviors. Greenleaf et al. (2009) stated that 90% of eating disorders occur in females and that the college setting can be an additional factor due to increased stress and anxiety, perceived loss of social support, and increased academic demands. Furthermore, the authors also concluded that eating disorders are more common among athletes than non-athletes. Glover (2006) stated that many female athletes are at risk for developing disordered eating behaviors because they constantly focus on achieving and maintaining a pre-determined body weight. Moreover, athletes "have a perfectionist, highly competitive, achieving and disciplined personality that drives them to go to great lengths to excel in their sport" (Glover, 2006, p. 4). Glover then cited another work (Yates, Leehey & Shisslak, 1983) that suggested that "competitive runners resembled anorexic patients" (Glover, 2006, p. 5). Furthermore, traits found in a "good athlete" parallel those of anorexic patients, making it difficult for coaches to determine the difference (Thompson & Sherman, 1999).

With regard to the type of sport as a predictor of eating disorders, the research is contradictory. Even though Glover (2006), Govero (2003), and Hornak & Hornak (1997)

all concluded that athletes of endurance sports and sports that place an emphasis on aesthetics are at a higher risk for developing eating disorders, Coker (2011), Greenleaf et al. (2009), and Griffin & Harris (1996) showed that type of sport was not a factor. "Researchers and college health professionals need to widen their view of which athletes are at risk. A failure to do so may lead to some athletes being overlooked and thus not receiving needed assistance" (Greenleaf et al., 2009, p. 492). Therefore, future research on disordered eating needs to include a variety of sports.

Much of the literature has shown an increase in the prevalence of clinical eating disorders, especially among female collegiate athletes (and an even higher increase among symptomatic athletes) even though coaches have become more knowledgeable in this area. Therefore, different solutions than those already recommended (i.e., not coaches' education) are needed to target prevention and management of disordered eating.

**Summary**

In summary, this comprehensive review of relevant literature included noteworthy areas influencing this study. Included in this review were (1) the coach's influence, (2) the education of coaches related to disordered eating, and (3) the prevalence of disordered eating in athletics.

This review indicates that there is a substantial gap in the literature pertaining to *effective* means of preventing and managing eating disorders and coaches' *positive* influence, especially from an athlete's perspective. Moreover, Turk et al. (1999) mentioned a need for further study to validate their findings and to determine actual effectiveness of coaches' education on disordered eating. The authors suggested that

coaches could benefit from “comprehensive” education in all domains of eating disorders. This current study thus defined knowledge via the athlete as an alternative source of education.

Govero (2003) suggested that even though the cross country coaches were quite knowledgeable, additional ways to increase knowledge were also needed. Her study concluded that there were not any significant differences in knowledge scores between the coaches who did and who did not attend a seminar on disordered eating. Therefore, recommending that coaches attend more seminars (as some of the studies did), may not be the most effective method to prevent and manage disordered eating. Changing a coach’s curriculum, from the mere learning of facts to the implementation of action steps, is what this study aimed to accomplish instead.

Furthermore, “more research is needed to better understand the disordered eating behaviors and attitudes of female collegiate athletes” (Greenleaf et al., 2009, p. 494). Therefore, this study’s purpose was to understand better those behaviors and attitudes through interviews with athletes. We know from the literature what athletes do *not* want to hear, but we don’t know what they *do* want to hear.

# Chapter 3

## Methodology

The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.
2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

The research methodology presented in this chapter includes the research design, the research context, the participants involved in the study, the instruments and procedures used in data collection, and the method of analyzing the data.

### Research Design

The research design for this study is a qualitative study using a grounded theory approach. The information necessary for this study was best gathered through this type of design because it aimed to "generate or discover [the following] theor[ies]" (Creswell, 2007):

1. A *strong*, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.
2. Once such a relationship is established, both verbal and non-verbal coach communications regarding athlete eating habits or physique should focus on *strength*.

According to the grounded theory approach, all participants experience a "process" (Creswell, 2007). In this study, all of the participants interact(ed) with an athletics coach. Because the theory was shaped by the views of the participants (and was not already established), in-depth interview questions were the most effective way to obtain the data. As opposed to a quantitative survey, interviews enabled the researcher to understand the emotions, sensibilities, and opinions of the participant. Moreover, due to the lack of research on positive coach behaviors, there were no quantitative metrics of this type (e.g., "My coach says 'X, Y, and Z'") to analyze in a survey or questionnaire.

**Research Context**

The interviews took place in private conference rooms at universities and colleges in the greater Philadelphia area, and over the phone with athletes across the country. The average length of the interviews was 50 minutes per athlete.

**Participants**

After obtaining certification through the Collaborative Institutional Training Initiative (CITI) and after approval from Drexel University's Institutional Review Board (IRB) for the Protection of Human Participants (Appendix A), both current and former

female collegiate athletes were recruited for this study. The participants for this study included 11 female collegiate athletes across eight different sports representing all three NCAA divisions as shown in Table 3.1 (note: the numbers add up to more than 11 due to multiple-sport athletes).

Table 3.1 Summary of Participant Sport and NCAA Division

| | Division I | Division II | Division III | TOTAL |
|---|---|---|---|---|
| Basketball | 1 | | 1 | **2** |
| Cross Country/Track & Field | 1 | 1 | 2 | **4** |
| Fencing | | | 1 | **1** |
| Field Hockey | | | 1 | **1** |
| Lacrosse | | | 3 | **3** |
| Soccer | 1 | | 2 | **3** |
| Squash | | | 1 | **1** |
| Volleyball | 1 | | | **1** |
| **TOTAL** | **4** | **1** | **11** | **16** |

Additional demographic data gathered from the research participants were compiled and are represented in Tables 3.2 and 3.3. These tables include information regarding the athletes' years of experience in their sport and the state in which they attended college.

Table 3.2 Number of Years of Athletic Experience of Participants

| Years of Athletic Experience | Frequency | Percent |
|---|---|---|
| 14+ years | 8 | 73% |
| 11-13 years | 1 | 9% |
| 8-10 years | 2 | 18% |

Table 3.3 State in Which Participant Attended College

| State | Frequency | Percent |
|---|---|---|
| California | 1 | 9% |
| Connecticut | 1 | 9% |
| Maine | 1 | 9% |
| New Jersey | 1 | 9% |
| New York | 2 | 18% |
| Pennsylvania | 4 | 36% |
| West Virginia | 1 | 9% |

Out of respect for each athlete's anonymity, participants will be referred to as Athlete A through Athlete K throughout the description of findings and as defined in Table 3.4.

Table 3.4 Participant List

| As Defined in Findings | Sport(s) | NCAA Division |
|---|---|---|
| Athlete A | Cross Country/Track & Field | I |
| Athlete B | | II |
| Athlete C | | III |
| Athlete D | Lacrosse, Soccer, Track & Field | III |
| Athlete E | Fencing & Lacrosse | III |
| Athlete F | Basketball, Field Hockey, Lacrosse | III |
| Athlete G | Soccer | I |
| Athlete H | | III |
| Athlete I | Squash | III |
| Athlete J | Volleyball | I |
| Athlete K | Basketball | I |

The method of participant selection was convenience sampling. Through the researcher's own professional network, LinkedIn (a professional online social network), Facebook, and Twitter, coaches, athletics administrators, and sports professionals were contacted to ask for help with recruiting participants. Personal contacts were notified of the research via e-mail and were asked to forward the communication to both their former and current athletes; those athletes who wished to participate in the study were asked to contact the researcher directly (Appendix B). To target LinkedIn, Facebook, and Twitter populations, the researcher sent a social media blast describing the research project and asking for volunteer athletes (Appendix C). Personal contacts (by

institution name and title only) who received these e-mails and LinkedIn groups who received the social media message are listed in Appendix D. Participation was voluntary and confidentiality was maintained. Both a consent form (Appendix E) and a permission form to be audiotaped (Appendix F) were reviewed and signed by the participant prior to the interview.

**Instruments**

The participants were given a preliminary survey during the first few minutes of the interview to determine if they exhibited disordered eating behaviors (Appendix G). These questions were adapted from Coker (2011) and "were by no means exhaustive enough to get a clear picture of possible confounding factors the athlete may be dealing with; however, it gave the researcher a rough idea" (p. 49). In addition to demographic information, the athletes were asked about which coach had the most positive influence on them, eating disorder history among themselves, family members, or teammates, their motivation for training, any additional exercise they do, and information on weight, height, and calories consumed in season. Permission was granted by the author to adapt this part of the instrument for the present study (Appendix H).

Following the introductory survey, the participants were asked a series of interview questions that stemmed from the literature review and research questions. The questions were grouped as shown below into verbal and non-verbal coach communications, to assist the researcher in aligning participant responses with the research questions. Refer to Appendix I for the comprehensive interview guide.

Verbal Communications

1. In general, what *words* make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy? Does your coach use those words?
2. Does your coach offer nutritional guidelines or talk about nutrition?
3. With your ideal meal plan in mind:
    a. Does your coach influence your eating behaviors? How?
    b. Do you eat differently *in front of* this coach? Why?
    c. Do you eat differently in general *because of* this coach? Why?

Non-Verbal Communications

1. In general, what *actions* of other people make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy? This can be anything from a high five to a pat on the back, etc. Does your coach perform those actions?
2. With your ideal meal plan in mind:
    a. Does your coach influence your eating behaviors? How?
    b. Do you eat differently *in front of* this coach? Why?
    c. Do you eat differently in general *because of* this coach? Why?
3. Who decides where to eat on road trips? How does this affect your eating behaviors?
4. How do you feel about the options of food for you on road trips and the food that's available before and after competitions? How does this affect your eating behaviors?
5. Does seeing what your coach eats affect your own food choices?

6. Do you think your coach has a healthy relationship with his/her body? How do you come to these conclusions?

To increase the likelihood that interview responses would align with the research questions, and to gain insight into how a potential athlete might respond, an expert panel provided the researcher with feedback on the interview guide, thereby strengthening the study's results. This panel consisted of professionals in the fields of athletics and nutrition as well as a former high school athlete with an eating disorder. Members of the panel are listed below:

1. A faculty member with a PhD in Sport Psychology who currently teaches Sport Management at a Division I institution. This panel member has extensive athletic and coaching experience as well as expertise in coaching and leadership.
2. A nutritionist, exercise physiologist, and faculty member (PhD, RD, LDN, and FACSM) at a Division I institution with international exposure who serves as an Associate Editor of the American College of Sports Medicine's Health and Fitness Journal and who was recently selected to be a member of the President's Council on Fitness, Sports and Nutrition Science.
3. An athletic trainer at a Division III institution with extensive knowledge of nutrition and experience with treating athletes with eating disorders (mainly through counseling and referrals to a registered dietician).
4. A former high school athlete who struggled with an eating disorder that prevented her from competing in college.

**Procedures**

Coaches, athletics administrators, and sports professionals were notified of the research study via the researcher's own professional network, LinkedIn, Facebook, and Twitter. These contacts were informed of the research and were asked to forward the information to their athletes; those who wished to participate in the study were asked to contact the researcher directly (Appendices B and C). The consent form (Appendix E) and the permission form to be audiotaped (Appendix F) were reviewed and completed by the participant prior to the interview.

At the beginning of the interview, the preliminary questionnaire (Appendix G) was completed and was followed by an approximate one-hour recorded interview. Saturation of data was seen after the sixth interview (i.e., the themes discovered in the first six interviews continued to appear in subsequent interviews), but the researcher interviewed five additional athletes to (1) gather more data to compare responses across sports, and to (2) interview participants with whom she had no relationship or prior introduction. While participant bias does exist due to the researcher's relationship with some participants, it should be noted that those interviewees with a previous relationship to the researcher were more open and comfortable sharing stories with the researcher than the other participants.

**Method of Analyzing Data**

The interviews lasted between 40 and 60 minutes in length and were conducted by the same researcher. The interview questions in Appendix I were used as a guide, freeing the athletes to expand upon and discuss other relevant topics. The environment

of private conference rooms was inviting and open, creating an optimal space for the athletes to share sensitive information.

The qualitative data gathered from these interviews were fully transcribed and then reviewed by the researcher. In grounded theory research, the analysis of data proceeds in stages and is referred to as "zigzagging:" going out to the field to collect data, coming back to analyze it, going out to the field to collect data … until it is saturated (Creswell, 2007). Transcript analysis involved placing responses into categories through the three phases of coding as defined by grounded theory research: open, axial, and selective.

Open coding refers to categories of information and involved examining the text of the transcript. The researcher then identified a single category as the "central phenomenon of interest." Axial coding was then used to "interconnect" other categories and examine how they relate to the central phenomenon. Information from this coding phase was then constructed to generate a theoretical model for the study. Finally, the researcher used selective coding (i.e., connection of all categories) to "tell the story" (Creswell, 2007). Throughout this process, the researcher also paid specific attention to determine if answers differed among sport.

**Summary**

Because the interview questions were divided into verbal and non-verbal coach communications, the data analysis from the interviews provided the researcher with the necessary information to achieve the purpose of the study:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.

2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

# Chapter 4

## Results and Discussion

The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.
2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

### Research Questions

The research questions for this study were the following:

1. What do female collegiate athletes believe are helpful verbal communications from their coaches with regard to disordered eating?
2. What do female collegiate athletes believe are helpful non-verbal communications from their coaches with regard to disordered eating?
3. Do the athletes' responses differ by type of sport?

**Demographics**

The participants for this study included 11 female collegiate athletes across eight different sports representing all three NCAA divisions. The participants included nine current and two former student-athletes and were distributed among sport and division as shown in Table 3.1. Ages of the participants ranged from 20-35; the youngest current athlete was a junior in college while the oldest former athlete was 14 years removed from college.

In addition to the demographic information obtained from the preliminary survey, the participants were also asked to identify a coach who had the most positive influence on them, eating disorder history among themselves, family members, or teammates, their motivation for training, any additional exercise they do, and information on weight, height, and calories consumed in season. The results from these questions are displayed in Tables 4.1 through 4.5.

Table 4.1 Coach with Most Positive Influence on Participant

| Coach's Position | Frequency | Percent |
|---|---|---|
| Assistant Coach | 1 | 9% |
| Head Coach | 10 | 91% |
| **Coach's Age** | **Frequency** | **Percent** |
| 20-29 | 1 | 9% |
| 30-39 | 7 | 64% |
| 40-49 | 2 | 18% |
| 50+ | 1 | 9% |
| **Coach's Gender** | **Frequency** | **Percent** |
| Female | 7 | 64% |
| Male | 4 | 36% |

Table 4.2 Eating Disorder History

| Among Participants | Frequency | Percent |
|---|---|---|
| Anorexia | 0 | 0% |
| Bulimia | 0 | 0% |
| **Among Participants' Family** | **Frequency** | **Percent** |
| Anorexia | 1 | 9% |
| Bulimia | 0 | 0% |
| **Among Participants' Teammates** | **Frequency** | **Percent** |
| Anorexia | 7 | 64% |
| Bulimia | 3 | 27% |
| Unsure | 1 | 9% |

Table 4.3 Participant Motivation for Training

| Primary Reason for Training | Frequency | Percent |
|---|---|---|
| Train to Improve Skills | 6 | 55% |
| Train to Win | 1 | 9% |
| Train to *both* Improve Skills and to Win | 4 | 36% |

Table 4.4 Additional Exercise Outside of Sport

| Days/Week of Additional Exercise | Frequency | Percent |
|---|---|---|
| Never | 4 | 36% |
| 1-2 days | 5 | 45% |
| 3-5 days | 2 | 18% |
| **Hours/Day of Additional Exercise** | **Frequency** | **Percent** |
| Zero | 4 | 36% |
| Less than an hour | 6 | 55% |
| 2-3 hours | 1 | 9% |

The average height of the participants was 5'6" and their average weight (while participating in college sport) was 140 pounds. Their calorie consumption while in season is outlined in Table 4.5.

Table 4.5 Calories Consumed by Participant in Season

| Daily Caloric Intake | Frequency | Percent |
|---|---|---|
| 1,000- 1,999 | 3 | 27% |
| 2,000 – 2,999 | 8 | 73% |

**Qualitative Data**

The 11 current and former athletes that participated in the study were the first to respond to the initial email about the research. Six of the interviews took place in person while five were conducted over the telephone. All 11 interviews were recorded and transcribed for data analysis. Because the interview questions (Appendix I) were divided into verbal and non-verbal coach communications (outlined in Chapter 3), the data analysis from the interviews provided the researcher with the necessary information to achieve the purpose of the study.

**Themes**

Based on the experience of the seasoned athletes who were interviewed, a framework can be constructed for a coach to understand the necessary components to communicating positively with their athletes on the topic of disordered eating. Please see Figure 4.1.

Figure 4.1 depicts the relationship of two critical areas – which are linked by the central theme of *strength* – developed from the interview data: *Coach-Athlete Relationship* and *Athlete Eating Habits & Physique*. The theory developed through the study's grounded theory approach is as follows:

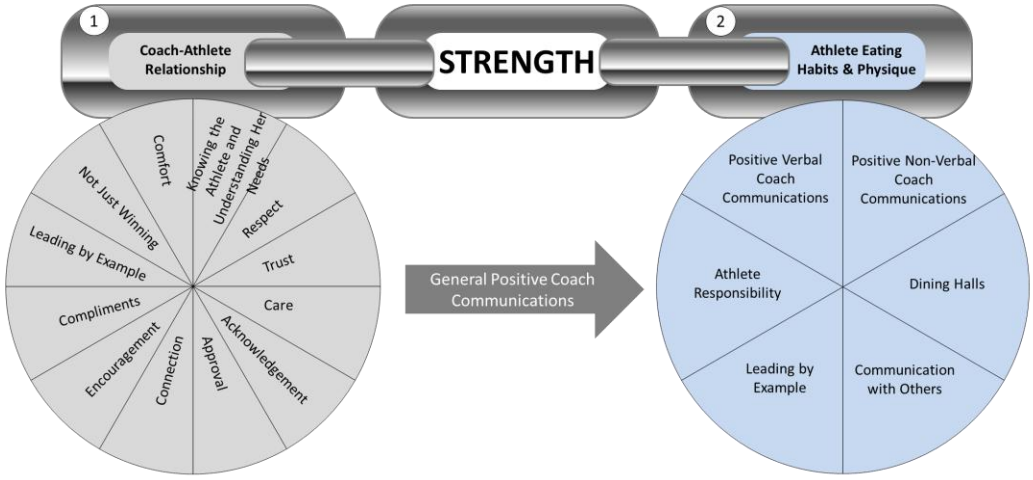
1. A *strong*, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.
2. Once such a relationship is established, both verbal and non-verbal coach communications regarding athlete eating habits or physique should focus on *strength*.

Figure 4.1 Components of Communicating Positively with Athletes on Disordered Eating


The central theme of strength thus has a double meaning. On the left-hand side of the chain, strength refers to the relationship bond between the coach and athlete and is thus a mental meaning of strength. On the right-hand side of the chain, strength refers to the content of coach communications with regard to athlete eating habits and physique and is thus a physical definition of strength. Moreover, not only does the sturdy chain depict strength pictorially, it shows the necessary link between theory part one and theory part two, namely that a strong coach-athlete relationship must first exist before communication about athlete eating habits and physique can occur.

Each of these components is further developed in Figure 4.2.

Figure 4.2 Critical Areas to Strong Coach-Athlete Relationships and Positive Coach Communications about Athlete Eating Habits and Physique




The analysis of interview data is divided into the following two sections: (1) existence and definition of a strong coach-athlete relationship and (2) positive coach communications regarding athlete eating habits and physique which exemplify strength. The pie charts under each side of the chain depict critical areas that further define the two parts of the theory. *Coach-Athlete Relationship* is defined by Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, Not Just Winning, and Comfort. All of these themes are general positive coach communications and thus create a bridge to positive coach communications with specific regard to an athlete's eating habits and physique. Before a coach can effectively communicate about athlete eating habits and physique, it is important that he/she has a solid understanding of *general* positive communication tactics.

The specific coach communications regarding athlete eating habits and physique are defined by Positive Verbal Coach Communications, Positive Non-Verbal Coach

Communications, Dining Halls, Communication with Others, Leading by Example, and Athlete Responsibility. Slices of the pie charts are of identical size since all themes are equally integral components of each section of the theory respectively. This structure aids in the understanding of the results and its relationship to the purpose of this study.

Out of respect for each athlete's anonymity, participants will be referred to as Athlete A through Athlete K throughout the following description of findings and as defined in Table 4.6.

Table 4.6 Participant List

| As Defined in Findings | Sport(s) | NCAA Division |
|---|---|---|
| Athlete A | Cross Country/Track & Field | I |
| Athlete B | | II |
| Athlete C | | III |
| Athlete D | Lacrosse, Soccer, Track & Field | III |
| Athlete E | Fencing & Lacrosse | III |
| Athlete F | Basketball, Field Hockey, Lacrosse | III |
| Athlete G | Soccer | I |
| Athlete H | | III |
| Athlete I | Squash | III |
| Athlete J | Volleyball | I |
| Athlete K | Basketball | I |

**Existence of a Strong Coach-Athlete Relationship.** Interview data demonstrated overwhelmingly that a strong coach-athlete relationship results in positive outcomes ranging from athletic performance to eating behaviors. Five of the eleven participants stated explicitly that a positive coach-athlete relationship must exist (1)

before a coach can communicate anything about athlete eating behaviors or physique, and (2) before an athlete will communicate a problem to a coach.

Athlete C shared the following with respect to this concept:

> I think what it really comes down to is **you have to develop a rapport**. **Before you say anything you have to be able to guess how it's going to be received** and you have to have an understanding of what the individual's concerns are. I think that with eating behaviors it's so individualized that you can't really prescribe something that's always going to work. If you are sensitive and you develop a rapport you will figure out [if] this is someone [you] can have an upfront conversation with, [if] it's someone who is motivated to be healthy, or if you're dealing with someone who is maybe more sensitive to criticism. (personal communication, April 1, 2013)

Athlete C then supported her argument with an actual example in which her coach became a "confidant" of a teammate who was suffering from an eating disorder. The teammate was so ill that she went away for treatment. During this time, the coach kept in touch with her and developed a "strong friendship" which resulted in her "healthy" return to the team (personal communication, April 1, 2013).

Similarly, when citing a teammate who suffered from an eating disorder, Athlete F mentioned, "she [the teammate] and the coach had built a relationship of trying to get her help" (personal communication, April 2, 2013).

Athlete D concurred in this analysis that a positive coach-athlete relationship must exist before any communication occurs regarding disordered eating. When asked what she would have done as an athlete facing a problem, she responded:

> I mean **it depends on your relationship with that coach**…if I had an issue and my coach approached me about it in the right way, I think I would have been OK with it because I felt comfortable with my coaches, so it really depends on the athlete's relationship with that coach. (personal communication, April 3, 2013)

Athlete J elaborated on this concept by stating that one must feel "comfortable" and be in a "welcoming environment" before opening up to a coach and seeking help, stating, "if you don't feel comfortable, you're not going to go seek the help that you need" (personal communication, April 3, 2013).

Lastly, Athlete H mentioned the importance of developing a strong coach-athlete relationship before a discussion of disordered eating behaviors can occur, inferring that a coach may even discover "normal" behaviors through such a relationship:

> I think that it goes back to the initial part of developing a relationship with your student athletes…**If they don't have a relationship with you, then why are they going to talk to you?** I think you have to develop those relationships with the players... [through] **trying to get to know them and establish[ing] that relationship, you'll kind of know what their normal behaviors are as well**. (personal communication, April 4, 2013)

All five former athletes cited above agreed that developing a rapport – one in which the coach "knows" the athlete and in which the athlete is comfortable – is an essential ingredient to discussing disordered eating. These insights, in addition to the success stories provided, support the first part of the theory presented by this study: a strong, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete. The

following section will define this “strong, positive” relationship that is paramount to successful coach communication with regard to disordered eating.

**Definitions of a Strong Coach-Athlete Relationship**. According to the interview data, a strong, positive coach-athlete relationship is defined by the following 12 themes: Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, Not Just Winning, and Comfort. These themes evolved from the interview question: “What does a positive coach-athlete relationship mean to you?” The responses of Athletes G, H, J, and K are as follows:

When Athlete G was a prospective student, she “knew” that her coach was personable, stating, “we sat in the cafeteria for one and a half hours and got to know each other” (personal communication, March 21, 2013).

Athlete J supported the claim that being personable is a positive attribute for a coach to possess: “[He was] very **relatable, very personable and he actually cared**, not just about us as an athlete but as a person. It’s caring about what’s going on outside the court, too” (personal communication, April 3, 2013).

To further support the definition of a positive coach-athlete relationship (and to confirm the importance of establishing a relationship discussed in the prior section), Athlete H explained why her coach had such a positive influence on her:

> I think that she had a positive influence on me **because she took the time to build a relationship and to teach the sport**. I believe that she showed confidence in her players…Soccer was where the relationship started, but then it could grow for a couple years outside of that…I know many teammates that

could just go in the office and close the door and have hard conversations. She was a good sounding board. (personal communication, April 4, 2013)

With regard to communication and understanding the athlete, Athlete K mentioned the value of having someone to talk to with whom she connected:

> **I definitely needed someone who would be able to talk things out with me**…having someone who wasn't necessarily pointing out where I messed up but talking through the next situation and how I would not mess up in the future. Someone who was on that wavelength with me as opposed to just highlighting all the mistakes. **I think those are the coaches that I responded to best.** (personal communication, April 5, 2013)

As was shown in the previous section and now confirmed with the prior anecdotes, a coach who takes the time to develop a relationship with his/her athletes and who is personable, caring, and an effective listener will create a helpful environment defined by strong, positive behaviors. The first theme that further exemplifies this theory by defining a strong, positive coach-athlete relationship is Knowing the Athlete and Understanding Her Needs.

***Knowing the Athlete and Understanding Her Needs***. When asked to discuss the coach who had the most positive influence on them, five of the eleven participants mentioned the importance of understanding the athlete's needs as well as her role on the team. Athlete A supported this claim through the following statement:

> **Having someone understand how I'm feeling is definitely important to me**…Some type of **understanding and perception** I think is definitely an added thing, but pretty hard to come about unless you know someone very well…she's

> able to have a pretty good gauge on where people are at mentally. I think **it's her taking the time to really get to know everyone** and how they work…I think the big part of it is her just taking the time to know what drives each of us and what things can motivate us. (personal communication, April 2, 2013)

Athlete D shared similar sentiments: "The coach has to figure out what each player needs during the week…we all do the same drills, we're all preparing for the same game, but **we all have different needs…it's really helpful when the coach is in touch**" (personal communication, April 3, 2013).

Athlete F confirmed the importance of taking the time to get to know one's athletes, both during and outside of practice: "I think a lot of it was taking the time to get to know people, to follow up about them, how was their day, what was going on outside of practice, outside of the games" (personal communication, April 2, 2013).

The theme of Knowing the Athlete and Understanding Her Needs is an integral finding of this study because not only does it define a positive coach-athlete relationship, it is a key component of the first part of the theory established by this research, namely that a strong, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete. Athlete C specifically mentioned that a coach may need to respond differently to a sensitive athlete with disordered eating behaviors versus one with whom a coach can be more upfront. Athletes G and J, compared with elite swimmer "Anne" who was discussed in the literature review, provided specific examples of this claim. Their stories show how different types of athletes (tough vs. sensitive) can react very

differently to essentially the same coach's comment. All three athletes were instructed by their coaches to lose weight.

Athlete G recalled that while her coach's comment made her upset, she did not let it affect her eating behaviors: "I didn't care…I ate what I wanted" (personal communication, March 21, 2013).

Athlete J recounted a similar story in which she also became dismayed, but then actually improved her eating habits and fitness:

> **I was heavy my freshmen year of high school…my coach was very harsh**…and I'll never forget it…I remember going home crying. He was like **"If you don't lose 30 pounds you're never going to go anywhere"** and obviously I'm like "Oh my gosh, how can you say that to somebody?" But what I did was **I went home and I worked out – I changed my eating habits** to make it healthier…I wasn't anorexic, I wasn't bulimic, or anything like that. I just started working out and I got myself on a fitness program. **It did change me for the better** but the way it came across...Then again, **I don't know if I would have worked as hard as I did and fueled the fire if I didn't hear it that way**, for me personally…**I liked when somebody was in my face**. At least he didn't say it in front of the team, he at least pulled me aside, but then I got stronger, I got physically better, my talent increased, my energy level increased…I would rather have somebody tell me straight up how it is. (personal communication, April 3, 2013)

On the contrary, elite swimmer "Anne" developed bulimia and was thus forced to end her career due to her coach's suggestion that she lose weight. Her coach had said,

"it would probably be more beneficial if you were lighter and slimmer and could lose a bit of weight and maybe you should look at dieting a bit more" (Jones et al., 2005, p. 384). One may even perceive this comment to be less harsh than the one used in Athlete J's scenario. Anne's coach *suggested* that she slim down while Athlete J's coach nearly threatened her that an athletic future would not exist if she did not lose a *specific amount* of weight. However, Anne's coach's comment had a completely opposite effect on her, leading to the development of an eating disorder as opposed to a healthier lifestyle.

These three stories stress the importance of knowing one's athlete and how she may react. Perhaps the coaches of Athletes G and J knew that those athletes were tough and thick-skinned and could thus make direct comments on weight. However, this same tactic did not have the same effect on Anne, who was more sensitive and reactive to her coach's comment. Athlete J mentioned that she preferred someone who was more upfront, while it is clear from Anne's reaction that she did not. Therefore, the chances of effective communication are greater if coaches take the time to get to know their athletes.

***Respect.*** A second theme emerging from the data which defines a strong coach-athlete relationship is Respect. Six of the eleven participants spoke of respect when defining a positive coach-athlete relationship. Athletes D, I, and K all spoke of a "mutual respect." Athlete D explained:

> A [positive coach-athlete relationship] definitely has a lot to do with respect, **definitely a mutual respect**. I think the coach-athlete relationships that failed in my athletic career were ones where I didn't respect the coach because of some

> reason, maybe I felt like they were treating me unfairly or something…**If you don't respect your coach you don't want them to talk to you about the problems you're having**. (personal communication, April 3, 2013)

Athlete D's comment further exemplifies the importance of respect with regard to this study because without a mutual respect between a coach and athlete, an athlete may not discuss her problems with the coach.

Athletes I and K further emphasized the importance of respect; their comments provide coaches with the knowledge of how to earn that respect with one's athlete, mainly through a coach's knowledge of the game and the coach's ability to tell the athlete what she does well.

Athlete I confirmed this assertion:

> I think a [positive coach-athlete relationship] means **mutual respect**, so the **player respects the skills and knowledge that the coach provides**…and I think from the coach's perspective a positive relationship is, again, **respecting the person as a player and highlighting what she's doing well**. (personal communication, March 22, 2013)

Athlete K supported the positive effect of a coach's knowledge of the game:

> A [positive coach-athlete relationship] means **mutual respect** and I think that respect is first a given but it has to be maintained by being earned. [My coach] came in with a **great resume** and a good presence about her that I kind of automatically respected and then she followed that through with **very intelligent conversations about the game**, **new fields that I respected and implemented**, and I think in comparison to other coaches…I always have that

> initial respect but I would sometimes lose it based on what I perceived as their awareness of the game or knowledge about the game. (personal communication, April 5, 2013)

Respect was further defined by Athletes E, H, and J by (1) being treated as a mature adult, (2) listening, and (3) seeking out one another. Athlete E stated that she "never felt like [her coach] was talking down to [her]" (personal communication, March 20, 2013), Athlete J stressed the importance of "active listening that's going both ways" (personal communication, April 3, 2013), and Athlete H described that a positive relationship is a two-way street:

> I think that the positive coach-athlete relationship is balanced between the constructive and the positive and that **everyone's best interests are there**, sometimes that's maybe understanding a certain player's role and being able to communicate that specific role, what you are looking for them to do, or how to improve and develop, or how they can best help the team. I think it's open-door so that **the player can seek out the coach but then the coach can also seek out the player**. (personal communication, April 4, 2013)

In summary, a strong, positive coach-athlete relationship is defined by a mutual respect. An athlete's respect for a coach can be gained through the coach's knowledge and skills and a coach's ability to provide positive feedback. With regard to this study, respect is a key component in communicating with an athlete who may have a problem. As some athletes suggested, an athlete may not wish to discuss a problem with a coach who they do not respect.

***Trust***. A third theme that defines a strong, positive coach-athlete relationship is Trust. Five of the eleven athletes mentioned trust as an important component of their own relationships with their coaches.

Athlete H defined an athlete's trust in a coach by the coach's ability to provide constructive feedback:

> She might pull somebody aside and say something constructive or positive. I think she **pointed out the things that we did well but also the things that we could do better** and so **because she would do both of those things it just built the trusting relationship**. (personal communication, April 4, 2013)

Athlete E elaborated on the definition of trust by stating the importance of feeling comfortable around the coach (Comfort is another defining theme of a positive coach-athlete relationship):

> I think a [positive coach athlete relationship] is one where the **player always feels like she can go to the coach** if she has a problem or a concern or just something she wants to talk out, even if it's not particularly related to the sport. (personal communication, March 20, 2013)

Reminiscent of the prior theme of Respect which was defined partly by a two-way street between a coach and an athlete, Athlete E continued to define trust, but this time she spoke about the coach's trust in her as an athlete:

> [My coach said,] "**I trust you to handle yourself and be able to deal with it** [poor performance] **and to know that if you need help you're going to come to me**." It was acknowledging that it happened, but it wasn't freaking out over it

> and making it into a huge thing. She very much let me deal with it on my own. (personal communication, March 20, 2013)

Four additional athletes further defined trust by the coach's confidence and belief in their athletes. Athlete E discussed this notion by reporting on her coach's expectations of her:

> **She's set a really high standard for you and it's because she thinks that you can meet it**, and if you don't meet it then there's a problem. **She wouldn't want you to play at this level if she didn't think you could do it**. So it's just this constant underlying tone of "This is where you should be. This is where you're capable of being." (personal communication, March 20, 2013)

Athlete K also discussed her coach's goals as a way to instill confidence in athletes:

> Quantifiable goals in shooting workouts…having to make seven of ten, or eight of ten before moving on and having punishments for that, but always with the mindset **"We're going to do this until we make it because you can make it"** and that was great. It was so challenging but also, what's the word, **empowering**…**The fact that it wasn't an option to not do it was great**, having that mindset that we could be here forever and you're going to do it eventually and there's not that kind of cop out like "You tried three times and you didn't quite make it but good try," **it was always "You gotta do it and you will."** (personal communication, April 5, 2013)

To further emphasize the importance of instilling confidence – and therefore trust – in one's athletes, Athlete D stated, "[my coach] really believed in me and helped me

feel like I was good enough" (personal communication, April 3, 2013). Furthermore, when describing the coach with the most positive influence, Athlete F said, "I think the biggest thing about her was she instilled confidence in me" (personal communication, April 2, 2013).

In summary, a strong, positive coach-athlete relationship can be further defined by trust. A coach can earn an athlete's trust by providing constructive, honest feedback and by showing confidence in his/her athletes. Furthermore, trust exists when an athlete feels comfortable around her coach, which is another defining theme of a positive coach-athlete relationship.

***Care.*** The fourth theme that defines a strong, positive coach-athlete relationship is Care, especially when a coach goes above and beyond his/her duties and shows concern for the athlete outside of her sport. When discussing the coach who had the most positive influence on them – and throughout the interview – eight of the eleven athletes shared various anecdotes about how much her coach cared for her and the team.

Athlete A explained how her coach makes her feel like a person and not just an "asset" to the team:

> Just having positive reinforcement that we're not just assets, and that **we are people and she cares about us** and she's emotionally invested in us as well…like if we stop running fast, she's not going to stop caring about how we're doing in life. (personal communication, April 2, 2013)

Athlete J, recalling how her coach also cared about her as a person and not just as an athlete, confirmed the assertion that it is important to care about one's athletes on

and off the field or court: “A [positive coach athlete relationship] is **caring about what’s going on outside the court too…**going to their events if they’re in a concert, if they’re in a play…so they feel that sense of support and community” (personal communication, April 3, 2013).

Athletes I and K added to the definition of care by describing how their coaches went above and beyond with regard to their athletes’ training.

Athlete I said, “every time I asked my coach to meet me outside of practice, he would meet me” (personal communication, March 22, 2013) and Athlete K shared a similar experience:

> [She] was always **committed to helping me work on my shot**, on different moves, talking about how I could improve the team’s performance as a whole. I really appreciated her attention, her time, and her vision for me…In terms of what I’m referencing that would be outside of practice. **It would be in individual workouts that we would do and talking outside of practice**. (personal communication, April 5, 2013)

Lastly, Athletes E, F, G, and H further defined a positive coach-athlete relationship as one in which the coach cares by discussing their coaches’ open-door policy, concern for athletes, help in every area of life, and weekly check-in meetings. Athlete H’s example was as follows: “She had individual player meetings and would check in, not just about soccer but about classes…” (personal communication, April 4, 2013).

In summary, a positive coach-athlete relationship can become stronger when a coach expresses care and concern for his/her athletes both during and outside of

practice. Care for an athlete can further be defined by showing concern or an interest in other facets of an athlete's life aside from her sport, acknowledging her as a person as well as an athlete, and going above and beyond one's assumed duties.

***Acknowledgement***. A fifth theme that defines a strong, positive coach-athlete relationship is Acknowledgement. Due to the amount of interview data within this category, the following sub-themes were created: Acceptance, Appreciation, and Making the Athlete Feel Important.

Athlete E spoke of the positive effect of a coach's acknowledgement, regardless of the coach's own opinion:

> **I like that he acknowledges my concerns** and he might acknowledge them and then be like "but they aren't as important as you think they are" or he might acknowledge them and be like "yeah, they're a big deal." So I guess for me, the biggest thing is **I have to feel like the person who's trying to comfort me or give me advice or coach me is taking my own input seriously and is recognizing that**. I like it if the person will acknowledge the point I'm making. (personal communication, March 20, 2013)

Similarly, Athlete J stressed the importance of acceptance, recalling her experience in college during which she had *hoped* for coaches that made her feel more accepted:

> I was injured and I felt like my college coaches didn't care because it was Division I and I wasn't being an asset to them on the team, so I felt really neglected…**I think that the coaches could have made themselves more accessible**, **they could have looked out for me** and maybe they were but I just

didn't feel it at all…**I felt uncomfortable because I didn't feel welcomed**. (personal communication, April 3, 2013)

In addition, Athlete H recalled her experience when she first arrived at college, further confirming the importance of feeling accepted on a sports team: "I think initially going to college my mental needs were just getting comfortable and getting confident in a new setting…Finding that sense of belonging" (personal communication, April 4, 2013).

The interview data revealed that Appreciation is another form of Acknowledgement, and both themes define a strong, positive coach-athlete relationship. Athlete I explained, "I think **I wanted to hear more from him** [my coach], and it could be just because I was a needy girl, but I wanted to hear more." Therefore, appreciation was especially affirming for Athlete I: "I think **he just appreciated what I was doing and really cared about my improvement**" (personal communication, March 22, 2013).

Athlete D explained how her coach's acknowledgement of her (by appointing her JV captain) led to a mutual appreciation: "She gave me extra responsibility and she made me the JV captain…helped me feel like I was good enough…I could tell she appreciated me and I definitely appreciated her" (personal communication, April 3, 2013).

The interview data also revealed that Making the Athlete Feel Important is another sub-theme of Acknowledgement. When asked to discuss a positive coach-athlete relationship and why their coach had such a positive influence on them, ten of the eleven participants spoke at length about how their coaches made them feel important.

Athlete E discussed how her coach valued her:

> She would ask, “How’s your day going?” and I could just tell her whatever or express being annoyed about something that had happened in class. We’d talk about it and I never felt like she was talking down to me. **I always felt like she really valued my input** about the team as a group, or individual players, and that **she saw me as a very important part of the team**. (personal communication, March 20, 2013)

Athletes B and D felt important on their teams because their coach appointed them as captains. Athlete B explained how her coach not only made her feel important, but how his encouraging actions also led her to pursue a career in coaching:

> **He felt that I had some type of leadership quality**. He appointed me as a captain my senior year and he encouraged me to pursue coaching full time…He’s I guess the “primary vehicle” of why I’m in coaching right now. (personal communication, March 20, 2013)

Athlete C confirmed that making an athlete feel important is a positive attribute for a coach to possess. Her comments also show the connection between this theme and the theme of Acceptance. Athletes of all levels could feel important on Athlete C’s team since the culture was one which accepted anyone who had an interest in the sport and which was defined by self-improvement as opposed to winning.

> It was a very **positive team environment**. We were focused on **self-improvement** and we did a really good job of being **very welcoming with people of all abilities** and when you do that you invite a bigger pool of people to

participate…by **focusing on inclusion and celebrating progress**, it's more nurturing. (personal communication, April 1, 2013)

Participants provided several other examples of Making the Athlete Feel Important which included both verbal statements and actions. Whether it was collecting and holding onto warm-ups while running a race, meeting with an athlete outside of practice time, writing individualized training plans, providing constructive feedback, or choosing an athlete as a starter, the participants who spoke of these experiences really valued the positive interactions they had with their coaches. In response to some of these examples, the following are interview excerpts from Athletes A, B, and K respectively: "She really meets our needs" (personal communication, April 2, 2013), "Oh, this guy does care…Coach just did that for me?" (personal communication, March 20, 2013), and "I really appreciated her attention, her time, and her vision for me" (personal communication, April 5, 2013).

In summary, Acknowledgement (along with Acceptance, Appreciation, and Making the Athlete Feel Important) enhances a positive coach-athlete relationship. Ways in which coaches can show acknowledgement are by recognizing an athlete's opinion regardless of his/her own opinion, accepting an athlete's beliefs regardless of disagreements, welcoming athletes despite injury, appreciating an athlete's contribution to the team, and including athletes of all abilities or at least celebrating progress. Lastly, sometimes the little things (e.g., holding onto a warm-up during a race) are all that it takes for a coach to show that he/she cares about an athlete.

***Approval***. The sixth theme that defines a strong, positive coach-athlete relationship is Approval. Four participants mentioned this concept when they were

asked to define positive feedback. The general consensus was that a coach's approval, and therefore validation of an athlete's feelings or actions, was extremely important to these athletes and determined whether or not a positive relationship could exist between them and their respective coaches.

Athlete B stated that her coach's approval was all she had sought:

> For me it was knowing that I'm doing well. I think for me when someone does say **"Hey, great job," that really means the world to me** because it means I'm doing something right, and **that's really all I was looking for**, I guess, **approval from my coach**. I tried my hardest so that I could get approval, go to the meets that I could race in, and **get a high-five**. I didn't really run just for that, but when you did get it, it was like **"Man! That means the world to me!"** Because you didn't get it often! (personal communication, March 20, 2013)

Athlete I, after being asked which words inspire her, also mentioned the importance of knowing that she was doing well: "**Making sure I'm doing it right – that was big**, if I was hearing that I was doing it right" (personal communication, March 22, 2013). On the other hand, Athlete E expressed what it would feel like if her coach did *not* approve: "She's one of those coaches where **feeling like she was disappointed in me would probably be the most devastating thing**!" (personal communication, March 20, 2013).

Lastly, Athlete J agreed that athletes often seek approval from their coaches, but she also suggested that it is especially important for coaches to show approval among *female* athletes: "I think that, especially females, you want to have the approval of your

coach, and I've always wanted that." In addition, Athlete J also commented on *how* she sought her coach's approval, citing her need to have pleased him:

> I don't know why, but it was always that "pleasing" thing that was going on, so **I always wanted to please my coach** even if I thought I was working hard and my coach said I wasn't, I always wanted to do it even better…I think females especially are people pleasers. (personal communication, April 3, 2013)

In summary, interview data indicated that a coach's approval also defines a positive coach-athlete relationship. Coaches can show approval through affirmation statements and high-fives, yet they also must be aware of how much their female athletes seek their approval and the implication that their confirmation holds.

***Connection***. Connection is the seventh defining theme of a strong, positive coach-athlete relationship. Eight of the eleven athletes discussed the positive effects of their coaches' frequent communication with regard to this theme and mentioned the following: "open-door policies," listening skills, and approachability.

Four athletes spoke about the positive effects of frequent communication. Athlete A explained:

> **I have pretty regular check-ins and meetings with my coach** [if] I think that I'm maybe working out too hard or I'm frustrated because I don't feel like my workouts are challenging me enough to be able to perform where I want to be at the end of the season. I think that **communication is really important because if you don't fully invest yourself in your coach's plan for you, then it won't work** whether it was the right one to begin with or not. (personal communication, April 2, 2013)

Three athletes described connection by the coach's "open-door policy" and listening skills. Athlete H summarized, "I think that **positive coach-athlete relationships are open door policy**…that there's listening…There needs to be **listening and comprehending** and clarifying, not talking *at* each other but talking *with* each other" (personal communication, April 4, 2013).

Lastly, a connection was also more easily established when a coach was approachable. Athlete A, who placed much emphasis on communication, confirmed this assertion:

> **One other huge thing for me is communication**. **I need to be able to know that my coach is approachable** and that I can honestly talk to him or her about anything that is going on. **Even on the personal side too**, because we are varsity athletes and a lot of things that happen on the personal or academic side do tend to come through in our running even if we don't want it to. (personal communication, April 2, 2013)

Athlete J, whose coach was *not* accessible, described the type of behavior she would have preferred from her coach: "I guess it's that relatability again, **to reach out to me**. I'm sure I could have also reached out to them, but it's that [lack of a] welcoming environment" (personal communication, April 3, 2013).

In summary, Connection can be defined by frequent communication, "open-door policies," listening skills, and approachability.

***Encouragement***. The eighth theme that defines a strong, positive coach-athlete relationship is Encouragement. Seven of the eleven athletes provided anecdotes of their coaches' encouragement when they were asked to define either a positive coach-

athlete relationship or positive feedback. Athlete B mentioned that her coach encouraged her to become a coach because he saw that she possessed leadership qualities (personal communication, March 20, 2013).

When asked which words inspire successful performance, Athlete C responded, "I think any kind of positive encouragement makes me want to perform well" (personal communication, April 1, 2013). Athlete A received encouragement from her coach both within and outside of her sport: "So she just really encourages us I think in a lot of different areas not only in running and I think that that makes us feel good about ourselves" (personal communication, April 2, 2013).

In summary, Encouragement was discussed in response to the interview question on positive feedback and was important to the athletes both within and outside of their sports.

***Compliments***. The ninth theme that defines a positive coach-athlete relationship is Compliments. When asked which words or actions make them happy, instill confidence, motivate them to perform well, and inspire them to be healthy, Athletes B and I both answered "compliments." Athlete B shared the following anecdote:

> **I would say when someone compliments me**, or maybe when they see me eating the foods that I eat, they'll say "Wow, you eat pretty healthily"… Especially when I get compliments on just how I still look fit even though I'm removed from college now…because we had a coaching change when I was a junior [in college], so I worked with him for three years – and, yes, he would say, **"You're looking fitter**." (personal communication, March 20, 2013)

Athlete I also commented that she liked hearing compliments from her coach:

> **Compliments like if they say "You're moving fast" or "You're technique is good."** Definitely in squash I have always been obsessed with having the proper technique in swinging the racquet, so if my technique was wrong I was motivated to fix it. (personal communication, March 22, 2013)

In summary, Compliments were important to a few athletes and included comments on physique and athletic skill and technique.

***Leading by Example***. Leading by Example is the tenth defining theme of a strong, positive coach-athlete relationship. While this category will appear later in the analysis of positive coach communications with regard to eating habits and physique, three athletes also spoke of their coaches as positive role models in general. Athlete E's "best coach she ever had" was a leader: "She was the best coach I've ever had so I really respect her and look up to her. **She always made a point of setting a good behavior through her own example**" (personal communication, March 20, 2013).

Athlete A described the positive effects of having a coach – who is also female – who shared similar experiences to her athletes:

> **She ran in college so she brings a lot of those experiences with her**. So we don't have to just spell it out for her what's going on, or if there are like stupid little petty girl issues, just random things that happen on women's teams that never would happen on a male team. (personal communication, April 2, 2013)

Lastly, Athlete F looked up to her coach because she was a realistic example of someone who successfully managed all facets of life:

> But also, she, to me, **was a real person**. She was **somebody that you could look up to** and say, you know she's a working mom, she has two small kids, a dog and a husband – she was just normal as opposed to this person who was living and breathing and doing all of these. (personal communication, April 2, 2013)

In summary, a coach who leads by example creates a positive environment for his/her athletes. Examples include modeling proper behavior and bringing one's personal experiences to the team.

***Not Just Winning***. The eleventh defining theme of a strong, positive coach-athlete relationship is Not Just Winning. Four of the eleven athletes defined their positive experiences as an athlete by a team culture that was not solely focused on winning. Athlete B explained, "he was always just **promoting things for general wellness** as opposed to, 'we're here to win'" (personal communication, March 20, 2013). Athlete C confirmed, "**he never made it about being the best**. It was about being your best and getting the most out of your talent…**it's about the journey**" (personal communication, April 1, 2013). Lastly, Athlete F added, "she created a culture that was more of **team building and respect** than a win-at-all-costs type" (personal communication, April 2, 2013).

These results are congruent with the findings from the preliminary survey. Six (55%) participants indicated that they train to improve skills and four (36%) noted that they train to *both* improve skills and to win. Conversely, only one participant (9%) indicated that she trained to win.

In summary, team cultures that focus on wellness and the journey – and stem from team building and respect – can be more positive than those that focus solely on winning.

***Comfort.*** Comfort is the twelfth and final defining theme of a strong, positive coach-athlete relationship. When asked to define a positive coach-athlete relationship, Athletes E and G stated respectively, "[one in which] the player always feels like [she] can go to the coach if [she] has a problem or a concern" (personal communication, March 20, 2013) and "comfort" (personal communication, March 21, 2013). Athlete A elaborated on how her coach makes the team feel comfortable:

> She stresses a lot that she wants **running and the team to be a place where we can feel like we come to get a break**, and her biggest thing is that we are having fun with it. We're working really hard, and we're going to perform really well, but **if we're not having fun with it then there's no point**. The best way to do that is just stay relaxed….she just wants us to do our best, but don't stress out about it. She **really, really emphasizes not getting caught up on the tiny little details** and rather going for the overall objective of the day or thinking long-term about the season. (personal communication, April 2, 2013)

Athlete J explained the importance of comfort when asked to define positive feedback: "Being open to somebody, being non-judgmental, creating that safe space…welcoming environment. **If you don't feel comfortable you're not going to go seek the help that you need**" (personal communication, April 3, 2013).

In summary, interview results showed that feeling comfortable around a coach strengthens a coach-athlete relationship and creates a more positive environment.

Comfort is a unique theme since it can be established through all prior 11 themes of Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, and Not Just Winning. Furthermore, the theme of Comfort – in conjunction with the 11 themes just listed – lead to an encompassing definition of a strong, positive coach-athlete relationship. All 12 themes are integral components of the first part of the theory defined by this research: a strong, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.

***General Positive Coach Communications***. The 12 themes just discussed are not only critical in defining the first part of the study's theory, they are general positive coach communications and create a bridge to positive coach communications with specific regard to an athlete's eating habits and physique, the second part of the theory. Before a coach can effectively communicate about athlete eating habits and physique, it is important that he/she has a solid understanding of *general* positive communication tactics.

The interview guide was written to discover both positive verbal and positive non-verbal coach communications. When defining positive verbal coach communications, six of the eleven participants agreed that constructive feedback is more effective than a mere "Good job." Athletes H and I preferred this type of feedback over comments that were more reminiscent of a "cheerleader" (personal communication, April 4, 2013; personal communication, March 22, 2013). However, interview data also revealed that it is more important for the coach to focus on what the athlete can improve, rather than

what she has done incorrectly. Several athletes mentioned that a coach should focus on what *can* be done as opposed to what *can't* be done. Athlete D explained these findings:

> I think the most positive feedback that I always remember [is] the verbal feedback. Even when it's constructive, you know not necessarily like "You're doing great just keep doing it" **more like constructive stuff I think is the best because it shows that [the coach is] really paying attention to you, not just saying "Keep it up" or "You're doing great,"** but really helping you fix something that's wrong, but in a positive way. I think that's really the best… **"You were doing this, and that's alright, but this might help you go faster**. This might help you feel better…That was great but you might want to try doing this next time," but in a **constructive, positive way where [the coach is] obviously paying attention, and we really appreciate that**. (personal communication, April 3, 2013)

Athlete K also defined positive feedback by constructive comments, placing emphasis on ensuring that the athlete has the capability to change:

> Positive feedback…I think it's definitely **recognizing when someone has done well and if there's something that they could do better**, presenting that too, **but always in the context that he or she is able to do that**. They have the capabilities, the skill set, and the work ethic necessary to make that happen. So never discouraging in the sense that it's impossible for them to do, or will never happen, but **always with that undertone or that context that it is in their scope of ability**. (personal communication, April 5, 2013)

Athlete H elaborated on the definition of positive feedback by explaining how a coach can focus on the actual action to get the message across. Moreover, the coach's comments served a purpose:

> She didn't beat around the bush but she was just as encouraging as teammates were. She wasn't a cheerleader either. It wasn't Rah! Rah! Rah! **Her communication had a point**…**it was constructive; it wasn't just "good job." It was more about "Nice run", "great cross,"** she kind of put an action to what you were doing. (personal communication, April 4, 2013)

Other forms of positive verbal coach communications identified in the interview data – and shared by four athletes – included affirmative words, a supportive yet slightly assertive tone of voice, joke and story telling, and daily check-ins such as "how are you feeling today?"

Positive non-verbal coach communications identified by five athletes included the coach's calm demeanor, encouraging body language such as high-fives or pats on the back, and upbeat personality. Athlete E spoke mostly of her coach's demeanor and body language in this regard, explaining how disappointment, if it existed, was communicated to the team:

> She's just very **calm and level headed**, [and] I need a very calm atmosphere. If she got upset, her body language pretty much was always the same and you could tell if she wanted to pump you up or she was really into it, but it was never – I never ever got the sense that – she might be disappointed in the team. Sometimes her coaching would just be **"So why'd you do that?" kind of like let's talk about how silly that was and let's laugh about it and let's get over**

> **it**. It was never like “What were you doing?” (personal communication, March 20, 2013)

In addition, Athletes D and I commented on their coaches’ positive personality, highlighting the helpful effects of their energetic spirit and optimistic temperament. Athlete D stated, “she was **very spirited**…she had **a lot of energy**…she would **always cheer for me**…she was all about well-being and really doing the best you can” (personal communication, April 3, 2013). Athlete I added:

> As far as when things are getting stressful, if I couldn’t get a shot, or every time I came to practice, **he had a really good demeanor and temperament**… **he seemed like a very happy person and I think that that affected me**. (personal communication, March 22, 2013)

Now that the purpose and complete definition of a strong, positive coach-athlete relationship have been defined, as well as what constitutes positive communication in general (thereby fulfilling part one of this study’s theory), the next section will reveal both verbal and non-verbal positive coach communications regarding athlete eating habits and physique, thereby affirming part two of this study’s theory.

**Positive Coach Communications Regarding Athlete Eating Habits and Physique which Exemplify Strength**. The central theme of this study’s analysis is strength, not only because it describes the cohesive relationship between a coach and athlete that must exist before communication of disordered eating can occur, but because it was the most common theme cited by all eleven participants as they discussed positive coach communications with regard to food, health, and body image.

When asked what words came to mind when thinking about motivation, performing well, and being healthy and happy as an athlete, Athlete H answered, "strong" (personal communication, April 4, 2013). Athlete B elaborated with specific examples of inspiration from her coach that encouraged strength:

> He always said having muscles and being defined doesn't make you ugly. **Strong is beauty**. You don't want to be some normal looking girl with unshapely arms…You want to be extraordinary and looking fit, feeling fit. That's beauty in itself. There are definitely forms, but being an athlete is beautiful. So I was like [about her coach], "You're right!" (personal communication, March 20, 2013)

Athlete B then described her coach's communication that being strong increases performance:

> At team camp…we would do weight-lifting there as well…he would give us physical examples. He would say "Do you know who Sara Hall is? And Ryan Hall? [Elite American runners]. You know they lift a lot but again, their physical stature is lean and muscular…**Essentially you want to get your body to a point where you're able to handle the training loads**" – it was all physiology. **We really didn't shift the focus to aesthetics** but more of – do you want to be fast? Well this is what it takes to be fast. So he gave a lot of examples of "Look at this person…this person isn't the ideal distance runner but this person can run fast because they can move with the weight." **Every body type is different. There's no one distance model physique**. We weren't really focused or fixated so much on the outside, it was more of like, "Oh man, I really need to

> condition my heart. Get my VO2 max up so that I can kick her butt!" (personal communication, March 20, 2013)

Similar to Athlete B, Athlete C also mentioned that positive communication around body image has more to do with strength than with an aesthetic.

> As far as being healthy, I think it's all about recognizing what healthy is and **focusing on health rather than a performance or an ideal of beauty or of an aesthetic**. Health and strength…That was a big part of our team culture, was being strong women and being healthy… I mean I think we know that the goal is kind of empowerment, and I'm not going to say that it works for everyone, but we were able to kind of have this **culture of strength and accomplishment** and it really started to click my junior year. We had this conversation at dinner one time where one of the girls on our team said, **"My body is awesome. My body is strong,"** and I think that was really **from the way that we did strength training that year**. You just gained this appreciation. Something about being able to do a pull-up that was very empowering.

Athlete C then alluded to the importance of emphasizing strength over the aesthetic of being a "typical skinny distance runner:" "**I think we kind of know what 'fast' looks like** and we can pick that out, but sometimes we do make mistakes. **We don't always know what strong looks like**" (personal communication, April 1, 2013).

In addition, Athlete A mentioned that the words "strong" and "balance" come to mind when she thinks of health and happiness. She described how her coach communicates these concepts:

> **She wants us to be happy, strong, young women first and foremost, and then the athletics come second**. And if at any time that interferes with us being well-balanced people, then it's time to re-evaluate what we're even doing. (personal communication, April 2, 2013)

To further support the impact of highlighting strength, Athlete E responded with the following when asked if she had a healthy body image: "I would like to think so. I really like lifting so **I want to make strength gains and get stronger**… [I really want to have] specific lifting goals…It's like athletic, and you're fit" (personal communication, March 20, 2013).

Athlete K, whose challenge was to gain weight, described her situation as the opposite of what she thought was the norm. With strength in mind, she was able to overcome her challenges:

> I was kind of **on the other end of the spectrum where I was always encouraged to eat more** and encouraged to gain weight because I was thinner than most players I was playing against. As far as that, it was definitely in my mind that I wanted to gain mass, to gain it in the right way and not lose my speed, lose my agility. It was almost something that I had to prove to the coaches that I was eating a lot…**I remember going to the recruiting dinner with a coach and eating a five-course meal and still being hungry and him making the comment "Oh, so you do eat!" and I was like "I know, I eat a lot!"** So that was kind of the inverse, I feel, of trying to lose weight at least… It was **definitely from the coaches [this encouragement to eat more], yet I kind of always knew it in my head**. I just opened my eyes and looked around

> me and saw that everyone I was playing against was bigger. **I just thought it would be beneficial for me to be stronger**. (personal communication, April 5, 2013)

In summary, strength is a critical concept when discussing eating habits or physique with a female athlete. Coaches can emphasize the ideal of strength by shifting the focus on aesthetics to one of health, well-being, accomplishment, and performance. The following sections reveal actual communications that coaches can say and do with regard to athlete eating habits and physique.

According to the interview data, positive coach communications regarding athlete eating habits and physique which exemplify strength are defined by the following six categories: Positive Verbal Coach Communications Regarding Eating and Physique, Positive Non-Verbal Coach Communications Regarding Eating and Physique, Dining Halls, Communication with Others, Leading by Example, and Athlete Responsibility.

***Positive Verbal Coach Communications Regarding Eating and Physique***. The interview data revealed several ways in which coaches can verbally deliver positive communications to athletes with regard to their eating habits and physique. These include providing information on nutrition, educating athletes about recovery, talking about food as fuel, and stating potentially hurtful comments in a tactful manner.

Four of the eleven athletes mentioned helpful comments about nutrition that came directly from their respective coaches. These communications included information on food groups, portion sizes, and the purposes of various foods. In addition, Athlete I provided a suggestion for a coach to communicate:

> Here's a food that, if you ate it, you would (I know this is not how it works) **but if you ate this food at these times, you would be faster**, or, if you ate this food you would be better at this. I think that would help. (personal communication, March 22, 2013)

The interviews also indicated how coaches' comments and education on recovery were helpful to athletes. Athlete A's coach delivered messages about recovery in conjunction with messages about strength:

> I think because she's a female coach she feels a little bit more comfortable being direct with us about the whole **correlation between disordered eating and making us feel good about ourselves**…I think that the way she does it is good in that it's not a constant topic…She won't say everyday "Make sure everyone is eating their bagels" blah blah blah **but more about recovery, the messages that she sends us are much more on the whole**. If we have an especially hard workout – actually **after almost every workout she'll say "Make sure you guys are recovering well tonight. Get a good meal in, get lots of sleep." Just like positive reinforcement messages like that, not strict mandates like "Go eat this and this and this."** (personal communication, April 2, 2013)

Athlete J, who again provided a retrospective remark, commented on what she would have liked to learn as an athlete with regard to recovery: "**Just about refueling your body**. I didn't really do that very well. They told us to drink a lot of water and we were already drinking a lot of water, but refueling, what keeps you going" (personal communication, April 3, 2013).

Another method by which a coach can positively and verbally promote healthy eating habits is by talking about food as fuel. Five participants shared anecdotes about how their coaches exemplified this. Athlete B's coach compared his athletes to a sports car, providing the message that what you put into your body will have an effect on your performance:

> He always used the example of us being cars and **if we were a fast sports car, if we were going to beat people on road-races, what do we want to fuel ourselves with?** Do you want to be fueled with 87 gas, or do you want to fuel yourself with the high-octane gas that's going to make you perform better? **You want to put good things in your body so that you can perform better on the track**. (personal communication, March 20, 2013)

Athlete I suggested that a coach should avoid potentially harmful words by speaking instead about food as fuel: "I think it would have been good to word it in a way…maybe have one or two conversations about nutrition and never use the word "weight" or "thin" or anything like that, but only talk about food as fuel" (personal communication, March 22, 2013).

Similarly, Athlete H explained the benefits of focusing on the need for fuel:

> What has helped us in the past, in the very beginning of pre-season, is using the recovery sheet. I think that has been very helpful in encouraging a snack during the day or multiple times during the day, so that they may not be a six-small-meal type of person, but they're not just waiting for three meals a day, they know to keep fueling themselves. **I think that's what we talk about a lot is that we're fueling ourselves, not just "are you hungry?"** I would say, personally over

> the last couple years, that's how I've changed my perspective… is **fueling your brain and fueling your muscles**. **If you want to go you need fuel, and I think that resonates a lot with [athletes]**. (personal communication, April 4, 2013)

Lastly, the interview data overwhelmingly revealed many types of positive verbal communications that are tactful. Results showed specific examples of comments that coaches can say with regard to eating behaviors and physique of an athlete in an effort to avoid potentially harmful statements. The first group of data relates directly to the central theme of strength.

Athlete B explained what her coach would say if she happened to be out of shape: "Even when I was out of shape he didn't say 'Hey, you're looking fat.' He was just like, '**you're out of shape, you need to get stronger**'" (personal communication, March 20, 2013).

Athlete G's coach also emphasized "getting in shape." However, Athlete G's coach also told her to lose 10 pounds. When asked what she would have preferred to hear instead, Athlete G replied, "'you would compete at such and such a level if you could get into shape and run xxx, jump xxx, etc.' So **giving other goals that would maybe entail losing weight by default, but without explicitly saying so**" (personal communication, March 21, 2013).

Other specific examples of tactful comments coaches can say are with regard to specific food intake, particularly those that are gentler than, "Don't eat that." Athlete E described a situation in which her coach made a suggestion to eat oranges instead of drinking soda, and explained her reasoning for stating so:

> "Make sure you don't drink a soda before practice, you're probably going to have a sugar crash if you do that."…Or "if you're feeling a little sluggish on the field, we have **orange halves between games – try eating that, you might just need some energy**"…I feel like **it's not so much "Don't eat this food,"** just be conscious of the amounts you're eating and when you're eating it…and how that is going to affect your performance. (personal communication, March 20, 2013)

In comparison, while Athlete J's coach might have restricted soda, he did not explain his reasoning for doing so nor did he provide ideas for replacements, which is what Athlete J would have preferred: "Instead of getting an answer 'because I said so,' I think that I would have been more open to it [food restrictions] and understanding and not so whiny about it [if I knew the purpose]" (personal communication, April 3, 2013).

Athlete H provided another example of comments coaches can say to their athletes if they notice an unhealthy behavior or would like to make a change in a non-threatening manner:

> **Try to encourage a colorful plate**… You just want to try and get all the different colors on your plate… you know are you getting some fruits and vegetables in there? **"Would you be open to shifting your plate around?" you know, "would you be open to trying to be a little more colorful with your dinner plate?"** (personal communication, April 4, 2013)

In addition to comments on general eating behaviors and promotion of proper nutrition regardless of athlete, three participants provided examples of how coaches can respond to disordered eating behaviors among their athletes. Athlete C recalled a specific encounter that her coach had with a teammate:

> I know that [my coach] once asked [a teammate] pretty up-front about her own eating. He had been like **"What are your reasons for being a vegetarian? Are you a vegetarian to be restrictive?"** What she explained was like, "No, it's about animals," and I think that he did try to reach people from those parts pretty early, and he was someone who was willing to go there…having someone who can engage in that kind of real talk and say **"Hey, when you were a prospective student you ate meat and now you don't. I'm curious what's going on. How are you adjusting to this new way of eating? Is health food available to you, unlimited throughout the day, in your parents' pantries?"** (personal communication, April 1, 2013)

Athlete H agreed that having an open and inviting conversation would help facilitate things:

> I mean it's a difficult situation. It's easy to deny. So whether that's, "OK we're going to get the training staff involved because we're going to look at your heart rate and we're going to do body mass index", I mean I don't know, but you try to, I think, **have more data or at least talk to the student and try to give her an opportunity to have that conversation and talk and be open about what she's going through**. (personal communication, April 4, 2013)

Moreover, Athlete H concurred with Athlete C that asking the athlete if a raw or vegetarian diet is normal, for example, is better than accusing her of having an eating disorder:

> **Not "Hey are you going to the bathroom and sticking your finger down your throat?"** You're not attacking them personally that they're weak or that they

didn't eat enough. **I'd rather be able to say "I noticed that you had a really raw diet on your plate, is that something you're used to eating? Is that the diet that you usually eat?"** (personal communication, April 4, 2013)

In summary, Positive Verbal Coach Communications Regarding Eating and Physique include providing information on nutrition, educating athletes about recovery, talking about food as fuel, and stating potentially harmful comments in a tactful manner. Information on nutrition that athletes appreciated receiving was about food groups, portion sizes, and the purposes of various foods. Coaches should also promote recovery as opposed to strict mandates on what to eat. In addition, talking about food as fuel may entail comments about treating one's body like a fast sports car or thinking about food as energy. Lastly, tactful comments that coaches can say include encouraging a colorful plate as opposed to directing an athlete to eat vegetables, and emphasizing strength instead of instructing athletes to lose weight.

***Positive Non-Verbal Coach Communications Regarding Eating and Physique***. In addition to positive verbal coach communications, the interview data also indicated several ways in which coaches can non-verbally deliver positive communications to athletes with regard to their eating habits and physique. These include providing information on nutrition via a qualified professional, making recovery snacks available, allowing the athletes to choose the food options on road trips, displaying healthy behaviors oneself, and organizing team dinners.

Six of the eleven participants agreed that receiving nutritional information – especially from an athletic trainer or strength and conditioning coach – was helpful as they attempted to navigate a new environment of eating that their college setting

presented. Athlete D, who was told by the athletic trainer that she needed to get stronger in order to play soccer, valued the nutrition information she received from the athletic trainers:

> I realized as an athlete I needed more energy and to eat certain foods. I also had to make sure I was getting the right nutrients. **I think the education I got about nutrition in college definitely helped me have a better body image**. I did like hearing it from the athletic trainer because it kind of felt official…Like she knew what she was talking about, she knew athletic training and nutrition so it felt like we were getting correct information. (personal communication, April 3, 2013)

Athlete E's coach also brought in a sports nutritionist; the information she found most helpful about food included quantities and serving amounts, as well as its different benefits:

> He brought in a sports nutritionist and representatives from each team went and listened to a talk she gave…[she discussed] **how much protein, fat, and carbs you could get for different goals**, so if you're trying to build muscle mass eat more of this; if you're trying to lose weight, try to eat like this; if you want to just stay how you are, if you want to optimize your running ability…because there are different ways to eat to tweak what you're doing. (personal communication, March 20, 2013)

Athlete A's coach also ensured that an athletic nutritionist came to speak to the team before each season. Similar to Athlete E, Athlete A valued the information on the different purposes of food:

> Always at the beginning of practice or the season we had the athletic nutritionist come in and give us a little **refresher on what balanced meals are and what types of food are best for recovery**, what specific things we need to really make sure we keep enough of and additional supplements that we need and stuff like that. There are certain things that I didn't know when I started taking my iron supplements, like you can't have it within an hour of having caffeine or else you won't absorb any of the iron…**a lot of subtle things about interactions of food that may take away from the benefits**. (personal communication, April 2, 2013)

Just like Athletes D, E, and A, Athlete K benefited from both an athletic nutritionist and a strength and conditioning coach. Furthermore, Athlete K agreed with Athlete D that these trained professionals were more "credible:"

> **We had a nutritionist… Our strength and conditioning coach was very into nutrition as well**. We had the talk with the [nutritionist] …It was helpful… No, it was definitely more the strength and conditioning coach and nutritionist [than the coach]. It was kind of like he wasn't the model for this and for that, and I think he probably recognized that and **wanted to have someone give that speech who was more credible** maybe. (personal communication, April 5, 2013)

Athlete J – who had struggled with her weight and whose coach had advised her to lose 15 pounds – confirmed that education on nutrition is what she would have preferred as an athlete:

> I would love for them to start doing stuff on **how to go grocery shopping** and what to get…**I wish that I would have learned a little more**, whether it was

> them or the strength and conditioning coach, or the trainer, somebody talking to us…**it would be nice to have a calorie thing, nutrition, to see how much protein, how much fiber you're in-taking**. (personal communication, April 3, 2013)

Even though the above examples all involved a nutritionist and/or strength and conditioning coach, the coach was involved in arranging those meetings. Furthermore, Athletes B and K both discussed how their coaches *did* get more involved in providing nutrition information, mainly through handouts and summer packets.

The interview data also revealed that coaches were more directly involved when it came to recovery. Athlete B's coach provided the team with recovery snacks:

> He'd always say "I want you to come prepared for practice." That means bringing extra water, maybe a Gatorade, some fruit bars or granola bars. Also, **he always had snacks for us and drinks after a long run**. I was like, **"This guy is the best!"** Because he provided that stuff for us and **he told us the reason why: He's like if we're running past an hour, your body is essentially breaking down and you need something to replace everything that you've lost**. And so he would always have bagels, bananas, granola bars, fruit bars, sometimes oranges, and he'd always have water, PowerAde. (personal communication, March 20, 2013)

Similarly, Athlete A's team is provided with a refrigerator in the locker room so that the athletes can refuel immediately after a long workout: "We have a fridge in our locker room where a lot of people keep stuff for right after we finish cooling down, for when we're in the ice baths" (personal communication, April 2, 2013).

Another method by which a coach can positively and non-verbally promote healthy eating habits is by allowing the athletes to choose what they want to eat on road trips. Athletes B, F, and G specifically stated that they were given meal money when traveling to competitions and could choose any food option they wanted; there were no restrictions. Similarly, Athletes A, E, and I stated that either the coach or team would decide where to stop for food on the way home from a competition, but that there were always a lot of options. On the contrary – yet synonymous to her story of being told to lose weight – Athlete J was monitored, along with her team, during meal time. Therefore, just as she would have preferred to receive more guidelines on nutrition, she also would have preferred less restriction of her food choices:

> When we traveled **there were things we weren't allowed to get off a menu**. Somebody ordered chocolate chip pancakes once and the coach made him take them back. So we were constantly being watched… I think that by **giving us a little bit more of a choice on where we were able to go, and maybe not being as strict**. If we were done playing in a competition, let us eat food. We're still getting our workouts in; we're still making good choices. (personal communication, April 3, 2013)

Coaches can also non-verbally deliver positive communications to athletes with regard to their eating habits and physique by being aware of their own eating habits. Athletes C, F, and I all described scenarios in which their coach made them feel more comfortable with their own food choices after seeing what they, the coaches, were eating. Athlete C explained:

> **He [coach] had sweets and he would be like "It's OK to have cake after a workout.** You don't have to be super regimented about everything." He was actually role-modeling healthy behaviors and having a healthy relationship with food. I think that having positive role models is really important because, **especially with eating behaviors, when you see people who are doing things that are very restrictive, it can have a really large negative effect**. (personal communication, April 1, 2013)

Athlete F stated, "she would eat 'normal' things too…I would see her eating similar things that I would eat" (personal communication, April 2, 2013).

Lastly, the interview data revealed that team dinners were another means by which positive communications about food occurred. Athletes C and H both described how team dinner "normalized behavior" and was a time for enjoyment. Athlete C stated:

> We had **team dinners weekly** and it wasn't a mandatory thing. You didn't have to come. If you had a conflict it was fine. But on Wednesdays we would eat together, or at least we'd try to, and we were able to get a conference room where we could eat together. **I think that it kind of normalized behavior a bit and there was positive role modeling, too**. (personal communication, April 1, 2013)

Athlete H agreed that team dinner was a positive experience for her and her team:

> We really **enjoyed team dinners**, whether it was the dining hall or at somebody's house the night before a game, **it was camaraderie**…opportunity to get off campus and it was just straight up pasta and probably salad and garlic

> bread. It was our time as a team to prepare and be social and think about who we were playing the next day but it was probably a little bit more social. (personal communication, April 4, 2013)

In summary, Positive Non-Verbal Coach Communications Regarding Eating and Physique include providing athletes with the following: information on nutrition, recovery snacks, freedom of food choice on road trips, a model for healthy eating behaviors, and organization of team dinner.

***Dining Halls***. To expand upon both the verbal and non-verbal positive coach communications regarding athlete eating habits and physique, the results also showed that coaches should provide guidelines to athletes on how to eat in the dining hall. First, four participants specifically mentioned the college dining hall as a problem with regard to food choices. When asked if her ideal meal plan matches her reality, Athlete E responded that it "depends on what the DC [dining center] is serving" (personal communication, March 20, 2013). Athlete A confirmed that "navigating the dining hall is not easy" (personal communication, April 2, 2013). In response to the problem of not finding sufficient food choices at the dining hall, the following suggestions were provided by the interview data. Athlete C recommended learning how to be creative with vegetables at the dining hall:

> I think it might have been more important to say, **"I know eating in the dining hall is really different than eating at home, here are some things that you can do."**… I think that it's really important to figure out how to feed yourself in the dining hall… steamed vegetables were always disgusting. They were soggy, and then **I saw someone take the raw broccoli and put it in a bowl and put a**

> **plate on top and steam it in the microwave**…figuring how to make the dining hall food taste good. (personal communication, April 1, 2013)

Athlete J agreed that it would be helpful to learn how to eat in a college dining hall:

> **I would have loved to see a way to cook your food differently in the dining hall**. I don't know if they ever do that at schools. It would have been nice because here you are, an 18 year old, and you've never made food for yourself so **going to a dining hall is like a buffet** and you just go and pick things and you don't know why you're picking them but you know that they taste good. (personal communication, April 3, 2013)

Athlete D's insight provided support that learning how to eat in a dining hall – from the athletic trainer – was beneficial:

> After a while I got really, really sick of it. It was hard to find other stuff to eat because even though I'm not a vegetarian, I was kind of creeped out by the dining hall meat so I tried not to eat it, but at the same time I wanted to get enough protein and I didn't always like the hot meals and so I didn't eat that a lot. It was hard. Definitely…. [athletic trainer said,] **"You know the kind of foods that you can get this amount of calcium with, if you eat this at the dining hall; maybe add some cheese to your sandwich."** (personal communication, April 3, 2013)

Another success story was described by Athlete H, who as a current coach, brought concerns directly to Dining Services, thus providing her athletes with more food choices:

> **Talk to the student athletes. What is it that they want**…And that was where we ended up with plain grilled chicken - plain, warm, grilled chicken. **Taking that to Dining Services and saying this is the gap that we're missing**. It's at this time we're getting out of practice and so we still need all these food options in this 45 minute window. (personal communication, April 4, 2013)

In summary, teaching one's athletes how to eat in a dining hall, as well as voicing their concerns to dining services can have a positive effect on an athlete's eating behaviors. Since the dining hall is a challenge to navigate, knowing how to eat in the "buffet" atmosphere and having enough healthy options available can aid athletes in developing healthier eating habits.

***Communication with Others***. Up until now, the results have indicated ways in which coaches can positively communicate directly to their athletes with regard to eating behaviors and physique. The next category will explore a coach's communication with others. Seven of the eleven participants suggested that coaches should also communicate with team captains, athletic trainers, and strength and conditioning coaches, especially when disordered eating does exist on a team. Athlete C, who was the captain of her team, approached her coach when she learned that a teammate had a possible eating disorder:

> **I tipped off [my coach] because I had inferred that she was running multiple times a day and she had stress fractures so I was like "I should probably tell you."** I think she was pretty secretive and crafty. She didn't run outdoor track, obviously. I think she ended up taking that semester off, she didn't come back. (personal communication, April 1, 2013)

Athlete C continued to tell a story about another possibly affected teammate, stressing the importance of the coach-captain relationship:

> **If they don't tell you as a coach, they're probably going to tell someone else**. **In that case, having a relationship with your captain where they can come to you with things is important**, because they will try to take care of it on their own…When one of the freshman regarding another freshman came to me and was like "You need to talk to so-and-so about her eating," I'm like OK…and I sort of approached it but I also told [coach] at that point. (personal communication, April 1, 2013)

Confirming that the captains are an important link between the coach and the team, Athlete D added:

> **I think the captains are really a bridge between the coach and the team**…I was captain of soccer and we tried to meet every week…we would catch up and talk about how we thought people on the team were doing, **if we thought anyone needed any more attention**, you know that sort of thing, just like kind of catch up, briefing our coach on things that she might not have seen. But that would have been a time when **coach could have been like "OK, here we are gearing up for pre-season, I want to make sure people have healthy eating habits, that's something you guys should look out for."** She should tell the captains to try to be role models in the dining hall and if we saw anything that worried us to bring it to her attention. (personal communication, April 3, 2013)

In summary and according to this interview sample, approaching a captain, athletic trainer, or another coach or teammate have been successful methods for

managing disordered eating among female athletes. In addition, some participants responded with proactive approaches that coaches can take such as holding weekly meetings with captains where general athlete concerns can be addressed or advising the captains to model healthy eating behaviors in front of the team.

***Leading by Example***. Just as Leading by Example was a key theme of positive coach-athlete relationships, it appeared again in the interview data with specific regard to positive coach communications around eating habits and physique. Seven of the eleven athletes spoke about how their coach's healthy eating behaviors and involvement in physical activity inspired them to model similar actions. Athlete B described her coach as a role model in this fashion:

> Specifically with my coach, he was still very active in running. We would have 7:00 a.m. practices and **after our practices were done he would go for his own run**. So he was a living example. And when I saw that I was like "Man, this guy is cool!" He's actually being a physical example for us to get the job done ourselves. So if Coach is running then shoot, we better be running! **I think because he was a physical example, we essentially tried to mirror that**. (personal communication, March 20, 2013)

Similarly, Athlete H explained how her coach was an example for a relaxed attitude around food:

> **I think my coach was an example…she didn't make a big deal out of being vegetarian** in everything she did. We didn't talk a lot about food. We always had a snack in the office, iced animal crackers. **We never really made a big**

> **deal about food but we never discounted it either**. (personal communication, April 4, 2013)

Athlete K, whose coach was not the role model that the other participants described, explained how she would have respected her coach a little more if he modeled healthy behaviors:

> **If he had been in better shape that would have been just one more thing to respect him for**. So the fact that he wasn't just took away that piece of respect. I think for the most part we still respected him as a coach, it was just, I don't know, a little thing **where you see someone who's in great shape** and is kind of on the same level or at least with the same mindset as you. **It makes it easier to respect them just because of that**. (personal communication, April 5, 2013)

In summary, Leading by Example is not only a theme with regard to general positive coach communications, it is also an important concept with regard to specific positive coach communications around eating habits and physique. Moreover, coaches that model a healthy lifestyle for their athletes may inspire their athletes to follow in their footsteps and may also be better received and respected by their athletes.

***Athlete Responsibility***. The final category of positive coach communications regarding athlete eating habits and physique is Athlete Responsibility. In the discussion of a strong, positive coach-athlete relationship, interview data revealed that communication is not a one-way street. Coaches need to recognize that athletes can – and should – assume ownership of their issues in addition to seeking assistance. Athlete D described an athlete's responsibility as follows:

> **To play any sport you really have to be independent**. You can't always wait for that feedback. You gotta set your own goals and try to reach them, but the coach definitely has a heavy hand in that, in helping guide you. (personal communication, April 3, 2013)

Carrying this same sentiment to the topic of food, two athletes described how they, or their teams, took their eating behaviors into their own hands. Athlete J explained how she handled the harsh comments from her coach about losing weight:

> I'm sure we would want to hear it in a different way, but I don't know if I would have taken it as seriously and worked out as much as I did. **I got myself a personal trainer and I actually saw a nutritionist, so I sought out resources**. (personal communication, April 3, 2013)

Lastly, three athletes explained how they do not allow what their coaches eat to affect their own eating behaviors. Athlete E described how seeing what her coach ate didn't make her feel guilty or change what she was eating, but that it made her think about healthy eating in general:

> I'm not like "Oh you're eating a salad? I better make sure I get a steak." It's kind of like, "Oh Coach got a salad and I got a steak." **I'm not going to change my eating behavior but it might make me say "Oh, maybe I could have gone healthier with this."** Watching someone eat healthy I'm like "probably that was a bad idea." **But I don't think I have to eat healthy because [coach] is eating healthy and I gotta do what she does. It's just like, "good idea."** (personal communication, March 20, 2013)

Athletes F and K discussed how they as athletes deserved to eat what they wanted because they just competed in a game, whereas the coach did not. When asked if she felt guilty when her coach only ate a salad, Athlete F replied, “no, but I think I would rationalize it as ‘I just played X amount of minutes in a basketball game’ or ‘I played (whatever) and I’m exhausted and starving.’ She might not be as hungry” (personal communication, April 2, 2013). Athlete K confirmed that her coach’s food choices had no effect on her: “Looking at what he ate, I knew that he wasn’t a DI college athlete and I certainly wouldn’t say I approved of what he ate but it didn’t affect me at all” (personal communication, April 5, 2013).

In summary, athletes who were able to stand by their own behaviors, thus taking responsibility for their own actions, did not allow others to influence them in a harmful manner. This ownership is another form of strength, the central theme of the research findings. In the examples just provided, the athletes were mentally strong, mirroring the tough athlete persona of Athletes G and J discussed in the prior section.

In conclusion, the following categories define positive coach communications regarding athlete eating habits and physique which exemplify strength: Positive Verbal Coach Communications Regarding Eating and Physique, Positive Non-Verbal Coach Communications Regarding Eating and Physique, Dining Halls, Communication with Others, Leading by Example, and Athlete Responsibility.

Positive Verbal Coach Communications Regarding Eating and Physique include providing information on nutrition, educating athletes about recovery, talking about food as fuel, and stating potentially hurtful comments in a tactful manner. Similarly, Positive Non-Verbal Coach Communications Regarding Eating and Physique include providing

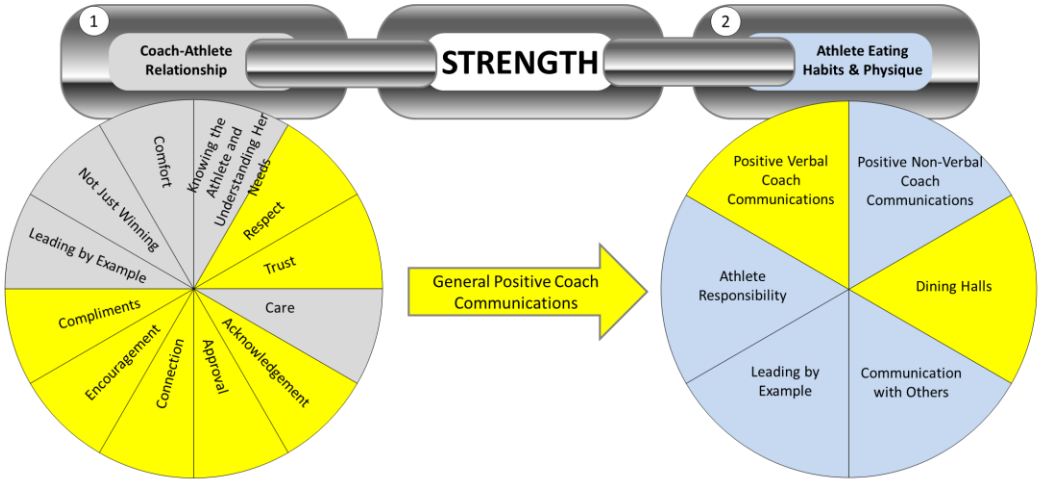
information on nutrition via a trained professional, making recovery snacks available, giving the athletes a choice of food options on road trips, being a model for healthy eating behaviors, and organizing team dinner. In addition, teaching one's athletes how to eat in a dining hall, as well as voicing their concerns to dining services can have a positive effect on an athlete's eating behaviors. Communication with Others entails approaching captains, athletic trainers, or other coaches and/or teammates about an athlete with disordered eating. Leading by Example is defined by coaches who model a healthy lifestyle for their athletes. Lastly, Athlete Responsibility adds to the central theme of strength because it is defined by strong-willed and tough athletes who can stand by their own beliefs and decisions without being negatively influenced by others.

**Discussion of the Research Questions**

A discussion of each research question and the corresponding data follows.

1. What do female collegiate athletes believe are helpful verbal communications from their coaches with regard to disordered eating? The data for this research question are most easily understood by analyzing the interview responses in the themes and categories highlighted in yellow in Figure 4.3.

Figure 4.3 Themes and Categories Which Answer Research Question One




Before specific verbal communications regarding disordered eating can be articulated effectively to female athletes, coaches should understand and be able to execute general positive verbal communications. Participants defined general positive verbal coach communications by constructive feedback, emphasis on what the athlete does well, explanation of directions to change something, affirmative words such as "Good job," joke and story telling, and daily check-ins such as "How are you feeling today?" In addition, general positive verbal coach communications can be further defined by the following seven themes: Respect, Trust, Acknowledgement, Approval, Connection, Encouragement, and Compliments.

A coach can verbally earn an athlete's respect and trust by providing constructive, honest feedback along with communication of what the athlete does well. A coach can verbally acknowledge an athlete by recognizing an athlete's opinion regardless of his/her own opinion and stating appreciation for an athlete's contribution to the team. Verbal approval includes affirmation statements such as "Hey, great job" and other comments that signify the athlete is performing the correct action. The positive

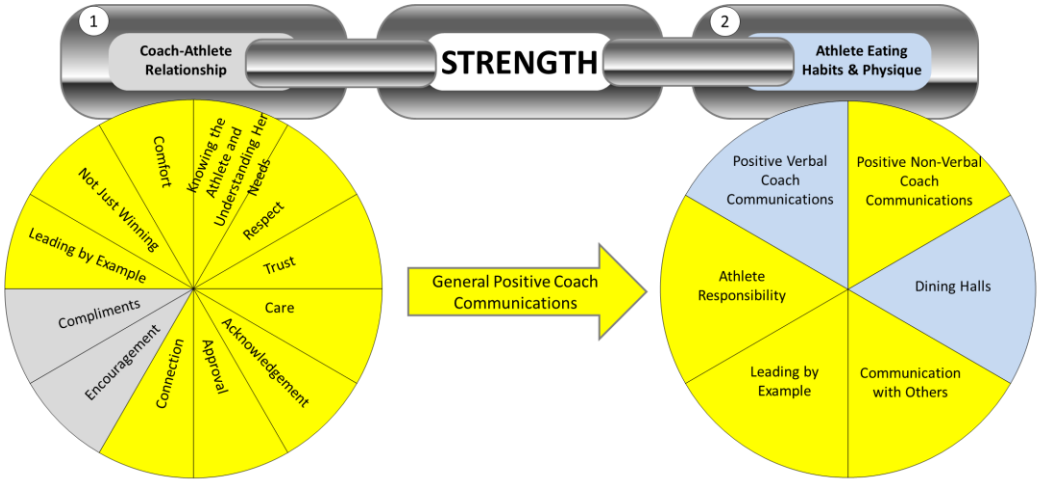
verbal coach communications that fall under Connection were identified by participants as frequent communication and an “open-door policy.” Frequent communication was defined by daily connection with everyone on the team (even if it is just a smile or pat on the back) as well as regular one-on-one meetings between the coach and athlete. A coach’s “open-door policy” links well with the need for athletes to have frequent communication since such a policy invites athletes in at any time and for any reason. Encouragement can also assume multiple forms. Participants spoke of a coach’s encouragement to pursue a career in coaching as well as a coach’s encouragement to perform well in sport. Compliments were important to a few athletes and included comments on physique and athletic skill and technique.

Not only do these seven themes (Respect, Trust, Acknowledgement, Approval, Connection, Encouragement, and Compliments) define general positive verbal coach communications, they create a necessary bridge to positive coach communications with specific regard to athlete eating habits and physique. Once an athlete can respect and trust her coach, has been acknowledged and approved by her coach, has experienced a connection with a coach and/or has been encouraged and complimented by a coach, she is more likely to respond well to comments about eating habits and physique.

Positive verbal coach communications with regard to athlete eating habits and physique include providing information on nutrition, educating athletes about recovery, talking about food as fuel, and stating potentially hurtful comments in a tactful manner. In addition, teaching one’s athletes how to eat in a dining hall, as well as voicing their concerns to dining services can have a positive effect on an athlete’s eating behaviors.

2. What do female collegiate athletes believe are helpful non-verbal communications from their coaches with regard to disordered eating? The data for this research question are most easily understood by analyzing the interview responses in the themes and categories highlighted in yellow in Figure 4.4.

Figure 4.4 Themes and Categories Which Answer Research Question Two




Just as with verbal communications, coaches should understand and be able to execute general positive non-verbal communications before they attempt to communicate non-verbally about disordered eating. Participants defined general positive non-verbal coach communications by a coach's calm demeanor, encouraging body language such as high-fives or pats on the back, and upbeat personality. In addition, general positive non-verbal coach communications can be further defined by the following ten themes: Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Leading by Example, Not Just Winning, and Comfort.

The theme Knowing the Athlete and Understanding Her Needs was best exemplified by the stories of Athletes G and J compared to the story of elite swimmer

"Anne." These three stories stress the importance of knowing one's athlete and how she may react. Perhaps the coaches of Athletes G and J knew that those athletes were tough and thick-skinned and could thus make direct comments on weight. However, this same tactic did not have the same effect on Anne, who was more sensitive and reactive to her coach's comment and ended up with an eating disorder. Athlete J (who developed a healthier lifestyle after hearing comments from her coach to lose weight) mentioned that she preferred someone who was more upfront, while it is clear from Anne's reaction that she did not. Therefore, the chances of effective communication are greater if coaches take the time to get to know their athletes.

A coach can non-verbally earn an athlete's respect through his/her knowledge and skills of the game, by treating athletes as mature adults, and by listening. A coach can non-verbally earn an athlete's trust by showing confidence and belief in his/her athletes. Care for an athlete can further be defined by showing concern or an interest in other facets of an athlete's life aside from her sport, acknowledging her as a person as well as an athlete, and going above and beyond one's assumed duties. Non-verbal acknowledgement can be exemplified by accepting an athlete's beliefs regardless of disagreements, welcoming athletes despite injury, including athletes of all abilities or at least celebrating progress, and making athletes feel important and valued (e.g., appointing an athlete as a captain, collecting and holding onto warm-ups during competition, meeting with an athlete outside of practice time, writing individualized training plans, or choosing an athlete as a starter). A coach can demonstrate non-verbal approval through actions such as high-fives, which go a long way. Approval was cited in the interview data as being especially important among female athletes.

The positive non-verbal coach communications that fall under Connection were identified by participants as listening skills and approachability. It is important for communication to consist of active, two-way listening between a coach and athlete. Furthermore, athletes mentioned that they appreciate when their coaches are welcoming and available for conversations.

Leading by Example can be further defined by modeling proper behavior and bringing one's personal experiences to the team, both which create a positive environment for athletes. Team cultures that focus on wellness and the journey – and stem from team building and respect – can be more positive than those that focus solely on winning. Lastly, a coach can make an athlete feel comfortable by creating an environment in which the athlete can approach the coach no matter what.

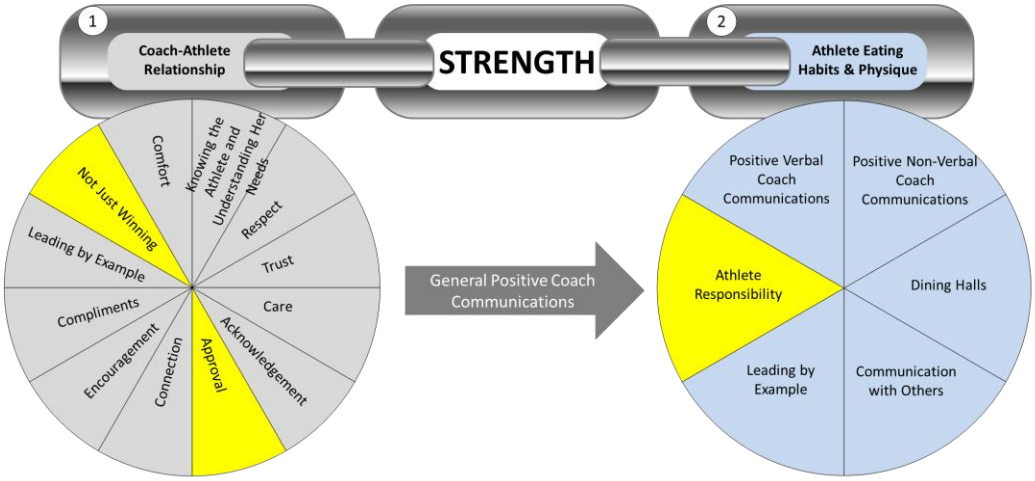
Not only do these ten themes (Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Leading by Example, Not Just Winning, and Comfort) define general positive non-verbal coach communications, they create an integral link to positive coach communications with regard to athlete eating habits and physique. Once a coach knows his/her athlete and how she might respond to certain triggers, and once an athlete can respect and trust her coach, has been acknowledged and approved by her coach, has experienced a connection with a coach, has a role model in her coach, competes in an environment not based solely on winning, and/or feels comfortable around the coach, she is more likely to respond well to communications about eating habits and physique.

Positive non-verbal coach communications with regard to athlete eating habits and physique include providing information on nutrition via qualified professionals or

handouts and summer packets, making recovery snacks available, giving the athletes a choice of food options on road trips, being a model for healthy eating behaviors, and organizing team dinner. Communication with Others entails approaching captains, athletic trainers, or other coaches and/or teammates about an athlete with disordered eating. Leading by Example is defined by coaches who model a healthy lifestyle for their athletes. Lastly, Athlete Responsibility adds to the central theme of strength because it is defined by strong-willed and tough athletes who can stand by their own beliefs and decisions without being negatively influenced by others. However, it is important that a coach realize this and allow his/her athletes to take ownership.

3. Do the athletes' responses differ by type of sport? In order to make as accurate a comparison as possible, this research only considered differences across cross country and track & field (XC/TF), lacrosse, and soccer since at least three interview participants were athletes in each of those sports (four participated in XC/TF, three participated in lacrosse, and three participated in soccer). There was only one participant in each of the other five sports (basketball, fencing, field hockey, squash, and volleyball). In the majority of themes and categories analyzed in the interview data, most respondents answered similarly regardless of sport. However, there are three themes and categories in which answers differed slightly among the four XC/TF athletes, the three lacrosse athletes, and the three soccer athletes: Approval, Not Just Winning, and Athlete Responsibility. These areas are highlighted in yellow in Figure 4.5.

Figure 4.5 Themes and Categories Which Answer Research Question Three




When defining a positive coach-athlete relationship and positive coach behaviors in general, only one (25%) XC/TF athlete, one (33%) lacrosse athlete, and no (0%) soccer athletes mentioned approval from a coach. Conversely, three (75%) XC/TF athletes, three (100%) lacrosse athletes, and one (33%) soccer athlete spoke about the importance of athlete responsibility. Therefore, there seems to be a link between Approval and Athlete Responsibility among XC/TF, lacrosse, and soccer. Those athletes that take more responsibility for their own actions, thoughts, and training may be less likely to seek approval from a coach. To further support this argument, collective participant responses from the other sports did not reveal the same discrepancy. Interviewees who participated in basketball, fencing, field hockey, squash, and volleyball placed equal emphasis on Approval and Athlete Responsibility when talking about positive coach-athlete relationships. Therefore, among these respondents, there is no clear conclusion that suggests a coach's approval is less important if the athlete assumes more responsibility.

With regard to Not Just Winning, three (75%) XC/TF athletes responded that their team culture promoted general wellness as opposed to solely winning, while only one (33%) lacrosse player and zero (0%) soccer players stated the same. However, results from the preliminary survey showed otherwise (i.e., no discrepancy in this category exists).

Further inspection of the interview data revealed some other discrepancies among sports, mainly between basketball and lacrosse. Athlete F played basketball, field hockey, and lacrosse in college and shared her opinions about the differences among sport:

> Different sports lend themselves to different types of communications…and this is totally stereotypical, but in my experience, **basketball players will eat more and be less concerned about their body image and I think it's because of the physical nature of the game.** It's different. It's OK to be…there are big girls who play basketball...there's this thought that basketball players are strong and big and muscular, whereas the **lacrosse team would be like "I don't want to get 'big.'"** I think that there's an **image that field hockey and lacrosse players are more "dainty"** and it's a more "finesse" game. That **contributes more to your concern about your physique**. I mean, the **basketball team would sit and eat pizza all the time and nobody would be like "Did you eat two pieces?"** They would eat five or six and that would be fine, nobody would question it; **but if that person did it on the other team, you wouldn't feel the comfort to be able to eat all you wanted**. (personal communication, April 2, 2013)

Athlete K, also a basketball player, confirmed that one's size is an integral component of the game:

> Just looking at my teammates who were maybe lifting more or able to push me off the block or something…I think it was definitely most apparent in rebounding when **you would go up for a rebound and somehow the other person took up the space more than I did**, even though I was scrappy and working. (personal communication, April 5, 2013)

In addition, these findings among both basketball players incorporate the theme of Athlete Responsibility. Athletes F and K had also commented how they as athletes deserved to eat what they wanted because they just competed in a game, whereas the coach did not. One can draw conclusions that Athletes F and K had a tough mindset since they were able to stand by their actions without allowing their coach's food choices to influence their own eating behaviors. As Athlete F mentioned, she most likely would have continued eating five slices of pizza even if the coach had ordered a salad.

As a current coach, Athlete F explained how she handles the disconnect between the "dainty" sports such as lacrosse and the requirement for athletes to be "big:"

> I am also conscious on the lacrosse field. **In defense we often talk about being "big" or having your stick up to appear bigger and I'm really conscious about how I frame that with somebody who is tall or who might be a little bigger** than… I mean I have people that are 5 feet on my team, and some people that are 5'8", 5'9", and I have people that are 100 pounds and

> people that are closer to 175. **Maybe I should just say that you need to be big and you need to use your size, but I think that a lacrosse player would be like "She called me fat," or "She called me big"**… [Instead] **I talk more about using your height, using your width, and demonstrating it with my arms**, or showing them when you stand like this it makes you small, when you put your arms out and have your stick up, look how much bigger you appear. (personal communication, April 2, 2013)

Lastly, in the discussion of the theme Knowing the Athlete and Understanding Her Needs, Athletes G and J (who played soccer and volleyball respectively) were described as being "tough" because they did not allow their coaches' harsh comments to affect their health in a detrimental way. After both were told to lose a specific amount of weight, Athlete G continued to eat what she wanted, stating "I didn't care" (personal communication, March 21, 2013), while Athlete J changed her lifestyle by improving her diet and hiring a personal trainer. Athlete J experienced positive performance gains and was proud of her newfound strength. In addition, she mentioned that she might not have taken the same action if her coach did not "fuel the fire" (personal communication, April 3, 2013). These athletes' stories are noteworthy because they result in a completely different outcome than that of elite swimmer "Anne" who was discussed in the literature review. After Anne's coach instructed her to lose weight, she developed bulimia.

Unfortunately, there is not enough data to draw conclusions between soccer, volleyball, and swimming, nor do we have evidence from the interviews or literature that show possible implications that swimmers are more "dainty" or "sensitive" as this small

sample suggests. Moreover, all three athletes competed at a high level. Athletes G and J competed at Division I institutions and Anne competed as an elite. However, exploration of the differences among NCAA division was out of the scope of this research, yet certainly warrants further study.

**General Discussion**

In summary, the use of a grounded theory approach in this research design enriched the overall purpose of the study. Communication with Athletes I and J confirmed the need for this study that coaches do not necessarily know how to act when faced with an athlete who exhibits disordered eating. Athlete I, who is also a coach, when asked how she would handle such an athlete, responded, "that's a good question. I don't know, I don't have enough experience with that yet as a coach. What would the protocol be? I don't know" (personal communication, March 22, 2013).

Interview data further confirmed the study's literature review with regard to female sensitivity and mandatory weigh-ins. Thompson & Sherman (1999) concluded that male coaches need to become more sensitive to women's issues. Glover (2006) also concluded that women process unpleasant words regarding body image more emotionally than men. Similarly, Athlete A stated, "I think that it's much easier for small comments to really affect a female runner rather than a male runner and I think that we respond in different ways to things that our teammates and coaches say" (personal communication, April 2, 2013).

Thompson & Sherman (1999) also cited several poor behaviors displayed by coaches, including public posting of team member's weights and pinching the athlete's body. Greenleaf et al. (2009) listed weigh-ins, revealing athletic attire, and additional workouts as forms of heightening coach pressure. Reel & Galli (2006) also commented

on mandatory weigh-ins, public humiliation, and pressure to gain or lose weight. Athlete J confirmed the humiliation that results from mandatory weigh-ins:

> We also had something that I didn't like and I've always felt uncomfortable with, is making us – **we had to weigh in with our trainers, our strength and conditioning coach, once every two weeks**. I know that everybody's different but when I was weighing in, and I was at a pretty good weight for my size, I was just very muscular, but I was at the best weight I ever was and **I still didn't feel like that was good enough**…**It was awkward, it was very awkward**. (personal communication, April 3, 2013)

Furthermore, the interview data fulfilled the need for the study. The literature review revealed several gaps in the research on disordered eating behaviors among athletes and *positive* coach communications. Hornak & Hornak (1997) concluded that weight loss can be attributed to a casual remark by a coach, and stated that "the monitoring and caretaking that some teammates (and coaches) would take on are not helpful to the eating disordered individual" (p. 37), yet they did not research findings to include what *is* helpful.

Furthermore, while Thompson & Sherman (1999) mentioned that performance can be enhanced by working with the athlete psychologically, they did not specify comments and actions for the coach to provide in order to achieve the ideals of "being 'mentally tough,' 'eliminating mental mistakes,' 'reaching one's potential,' and 'handling pressure'" (Thompson & Sherman, 1999, p. 149). Thompson & Sherman (1999) also believed that increasing a coach's education would decrease the incidence of disordered eating. They suggested a few prevention measures such as de-

emphasizing weight, eliminating group weigh-ins, controlling contagion (athletes copying other athletes), and treating each athlete individually. While they also recommended that a registered dietician provide information to both athletes and coaches, they did not discuss what athletes would find most helpful or if athletes would even prefer these methods.

Heffner et al. (2003) showed the potential detrimental effects of coaches' behavior with regard to disordered eating among athletes, especially among Division I and gymnastics. However, like the other studies just discussed, this study did not provide information on helpful or positive coaches' behaviors.

Govero (2003) suggested that even though the cross country coaches in her study were quite knowledgeable, additional ways to increase knowledge were also needed. Her study concluded that there were not any significant differences in knowledge scores between the coaches who did and who did not attend a seminar on disordered eating. Therefore, recommending that coaches attend more seminars (as some of the studies did), may not be the most effective method to prevent and manage disordered eating. Changing a coach's curriculum, from the mere learning of facts to the implementation of action steps, is what this study aimed to accomplish instead.

Therefore, the results of this study, through its provision of positive communication tactics for coaches to utilize with regard to athlete eating habits and physique, fill these gaps in the literature.

The qualitative data gathered from the interviews provided an in-depth view of positive communication strategies for coaches. Furthermore, interview data revealed the need for a strong, positive coach-athlete relationship, something that the original

research questions did not address. However, the first half of the results focus on the definition of a strong, positive coach-athlete relationship because it is an integral component of the first part of the theory developed through the study's grounded theory approach, namely that a strong, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.

Interview data demonstrated overwhelmingly that a strong coach-athlete relationship results in positive outcomes ranging from athletic performance to eating behaviors. Developing a rapport – one in which the coach "knows" the athlete and in which the athlete is comfortable – is an essential ingredient to discussing disordered eating.

Due to the finding that a strong, positive coach-athlete relationship must exist before communication about disordered can occur, it was pertinent that this type of relationship be defined. Interview data indicated that the definition is among the following 12 themes: Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, Not Just Winning, and Comfort.

Analysis of the theme Knowing the Athlete and Understanding Her Needs was best explained by Athlete C who stated that a coach may need to respond differently to a sensitive athlete with disordered eating behaviors versus one with whom a coach can be more upfront. This result was also confirmed by the stories of Athletes G and J in conjunction with elite swimmer "Anne" in which all athletes were instructed by their coaches to lose weight, but not all reacted in the same manner. Athletes G and J

moved in a positive direction while Anne developed bulimia. Their stories show how different types of athletes (tough vs. sensitive) can react very differently to essentially the same coach's comment.

Respect, the second defining theme of a strong, positive coach-athlete relationship was most frequently defined by being mutual between a coach and athlete. An athlete's respect for a coach can be gained through the coach's knowledge and skills and a coach's ability to provide positive feedback. With regard to this study, respect is a key component in communicating with an athlete who may have a problem. As some athletes suggested, an athlete may not wish to discuss a problem with a coach who they do not respect.

Trust was the third defining theme of a strong, positive coach-athlete relationship. A coach can earn an athlete's trust by providing constructive, honest feedback and by showing confidence in his/her athletes. Furthermore, trust exists when an athlete feels comfortable around her coach; this comfort is an overall defining theme of a positive coach-athlete relationship.

The fourth theme defining a strong, positive coach-athlete relationship is Care, particularly when a coach expresses concern for his/her athletes both during and outside of practice. Care for an athlete can further be defined by showing concern or an interest in other facets of an athlete's life aside from her sport, acknowledging her as a person as well as an athlete, and going above and beyond one's assumed duties.

Acknowledgement (along with Acceptance, Appreciation, and Making the Athlete Feel Important) is the fifth theme that enhances a positive coach-athlete relationship. Ways in which coaches can show acknowledgement are recognizing an athlete's

opinion regardless of their own opinion, accepting an athlete's beliefs regardless of disagreements, welcoming athletes despite injury, appreciating an athlete's contribution to the team, including athletes of all abilities or at least celebrating progress, and recognizing and catering to various athlete needs (e.g., a gluten-free diet). Lastly, sometimes the little things (e.g., holding onto a warm-up during a competition) are all that it takes for a coach to show that he/she cares about an athlete.

The sixth theme that defines a strong, positive coach-athlete relationship is Approval. Coaches can show approval through affirmation statements and high-fives, yet they also must be aware of how much their female athletes seek their approval and the implication that their confirmation holds.

Connection is the seventh defining theme of a strong, positive coach-athlete relationship and can be defined by frequent communication, "open-door policies," listening skills, and approachability.

The eighth theme that defines a strong, positive coach-athlete relationship is Encouragement. Encouragement was discussed in response to the interview question on positive feedback and was important to the athletes both within and outside of their sports.

The ninth theme that defines a positive coach-athlete relationship is Compliments. Compliments were important to a few athletes and included comments on physique and athletic skill and technique.

Leading by Example is the tenth defining theme of a strong, positive coach-athlete relationship. A coach who leads by example creates a positive environment for

his/her athletes. Examples include modeling proper behavior and bringing one's personal experiences to the team.

The eleventh defining theme of a strong, positive coach-athlete relationship is Not Just Winning. Team cultures that focus on wellness and the journey – and stem from team building and respect – can be more positive than those that focus solely on winning.

Comfort is the twelfth and final defining theme of a strong, positive coach-athlete relationship. Interview results showed that feeling comfortable around a coach strengthens a coach-athlete relationship and creates a positive environment. Comfort is a unique theme since it can be established through all prior 11 themes of Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, and Not Just Winning. Furthermore, the theme of Comfort – in conjunction with the 11 themes just listed – lead to an encompassing definition of a strong, positive coach-athlete relationship. All 12 themes are integral components of the first part of the theory defined by this research: a strong, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.

**Implications for Future Research**

Interview data revealed four areas of opportunities for further research related to the topic of female collegiate athletes and disordered eating: (1) the influence of others on an athlete's eating behaviors, (2) the prevalence of eating disorders among male athletes and their definitions of positive coach communications, (3) a more thorough

comparison of this study's findings across NCAA division and sport, and (4) an analysis of this study's purpose based on gender of the coach.

1. While substantial data were gathered to answer the research questions of this study, ten participants (91%) discussed how others, aside from their coaches, influenced their eating behaviors. Furthermore, while no participants indicated on the preliminary survey that they had been diagnosed with an eating disorder, eight (73%) noted that a teammate did. Five participants discussed in their interviews that their teammates had a substantial effect on either their own eating habits or on those of others on the team. Other participants noted that family members and self-pressure affected their eating habits and body image. Moreover, both positive and negative effects were discussed and should be explored further.

Athlete C recalled her experience when a fellow athlete with a possible eating disorder returned to the team:

> **My senior year we let a girl back on the team who had a history of problems**…and I was like, **this is a terrible idea because this girl had the worst, unacknowledged eating disorder** I saw in my time in [college]. I knew that I should fight this because she was **the girl who looks the fastest** and I think that younger members look at who they think is going to be fast. **They kind of copy these people because you want to be doing what they're doing. If they're eating cheerios, then cheerios make you fast. Or if they're not eating, then that's what makes you fast.** And the thing about this athlete was that you knew she was going to come in to training and she was going to be moderately fit, and she would be very thin and she would look fast. Then her

anemia would catch up with her and she'd run crappy for the rest of the year. And that's exactly what happened. **Three of the freshmen that year started modeling her eating behavior**. (personal communication, April 1, 2013)

Athlete I encountered a similar experience, but also experienced influence from roommates:

> **The influence [on my body image] was completely their behaviors, my roommates and my teammates**. In [college], **it was all about the dining hall. That's where the eating disorder stuff happened**. The dining hall and some teams I think were worse than others. You know, **you saw who you were eating with, what they were eating**. That's where it came from. I think the eating problems in [college], based on the other athletes I've talked to, came from **peer-behavior**. (personal communication, March 22, 2013)

On the other hand, future research on disordered eating among athletes should also encompass positive influences from others. Athlete D indicated that her teammates had a positive influence on her eating behaviors: "I think it was more like everyone else. I was eating with our team and so everyone else was kind of eating healthier. So I kind of started doing it too" (personal communication, April 3, 2013).

2. During recruitment for this study, the researcher received several questions about why this study did not include males. While the researcher realized that men also suffer from disordered eating, females were chosen as the population of study since they are the population of athletes at highest risk for eating disorders. Furthermore, females were selected to narrow the researcher's focus and to conduct research that directly related to the researcher's personal interests, experiences, and career goals.

However, since males are also affected by disordered eating, further study of their perceptions of positive coach communications is warranted.

3. While the third purpose of this study was to discover if findings differ across sports, only a few comparisons were possible given the limited number of athletes recruited in each sport. Participants represented eight sports, but only three sports included three or more athletes for accurate comparison. Therefore, future research of this study's purpose should aim to recruit more athletes among the same sports. Furthermore, findings from the stories of Athletes G, J, and "Anne" would be much more compelling if one were able to determine why Athletes G and J reacted so differently from Anne, despite all three athletes being instructed by their coach to lose weight. Athletes G and J were Division I soccer and volleyball players respectively, while Anne was an elite swimmer. Exploration of the differences among NCAA division was out of the scope of this research, yet certainly warrants further study.

4. According to Table 4.1, seven (64%) participants indicated that the coach who had the most positive influence on them was female. While the purpose of this study did not explore differences between the genders of a coach when dealing with disordered eating, this quantitative table suggests a need for future research in this area, specifically if the implications given in the following section differ by gender of coach.

**Implications for Coaches**

The most meaningful and important contribution of this research is the benefits it can potentially provide to both current and future coaches of female collegiate athletes. While the purpose of the study was to gain insight into and understanding of the helpful

behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors, results also showed general ways in which coaches can communicate to strengthen their relationship with athletes.

Female collegiate athletes are particularly interested in a coach who spends time getting to know his/her athletes and who acknowledges, understands and meets their needs. This entails going above and beyond one's usual duties; respect and trust are not easily earned. One of the easiest ways for coaches to do this is to show that they care about their athletes. Whether it is checking in with them on a daily basis or attending one of their concerts outside of practice, a coach's acknowledgement and support goes a long way in developing a healthy and strong relationship. Moreover, the three stories of Athletes G, J, and elite swimmer "Anne" stress the importance of knowing one's athlete and how she may react. Perhaps the coaches of Athletes G and J knew that those athletes were tough and thick-skinned and thus could make direct comments on weight. However, this same tactic did not have the same effect on Anne, who was more sensitive and reactive to her coach's comment. Athlete J mentioned that she preferred someone who was more upfront, while it is clear from Anne's reaction that she did not. Therefore, the chances of effective communication are greater if coaches take the time to get to know their athletes.

With regard to more tangible communications that coaches can utilize, female collegiate athletes in this study appreciated encouragement and compliments, especially when such comments focused on what they *could* do, as opposed to what they *couldn't* do. Moreover, coaches who are aware of their own behaviors – and can role model happiness and health – may be much better received by their athletes,

thereby increasing the strength of the coach-athlete relationship. These general communication tactics can also be utilized in specific communications about athlete eating habits and physique.

Lastly, once the strong, positive coach-athlete relationship is established, coaches are more likely to be successful at communicating with athletes about disordered eating. The central theme of this research – strength – is what coaches should keep in mind when communicating information about athlete eating habits and physique. Strength is a critical concept when discussing eating habits or physique with a female athlete. Coaches can emphasize the ideal of strength by shifting the focus on aesthetics to one of health, well-being, accomplishment, and performance.

Positive verbal coach communications which exemplify strength were provided by the interview data; examples are listed below:

1. “Having muscles and being defined doesn’t make you ugly. Strong is beauty” (personal communication, March 20, 2013).
2. “Never use the words ‘weight’ or ‘thin’ or anything like that, but only talk about food as fuel” (personal communication, April 3, 2013).
3. “It’s all about recognizing what is healthy and focusing on health rather than a performance or an ideal of beauty or of an aesthetic” (personal communication, April 1, 2013).
4. “I think it might have been important to say, ‘I know eating in the dining hall is really different than eating at home, here are some things you can do’” (personal communication, April 1, 2013).

5. “After almost every workout she’ll say, ‘Make sure you guys are recovering well tonight. Get a good meal in…’ Positive reinforcement messages like that, not strict mandates like ‘go eat this and this’” (personal communication, April 2, 2013).
6. “Try to encourage a colorful plate… ‘Would you be open to shifting your plate around?’” (personal communication, April 4, 2013).

Positive non-verbal coach communications which exemplify strength were provided by the interview data; examples are listed below:

1. Arranging meetings for athletes to acquire nutrition information from qualified professionals such as nutritionists, athletic trainers, or strength and conditioning coaches; providing handouts and summer packets that include nutrition information
2. Providing recovery snacks
3. Giving athletes a choice of food on road trips
4. Organizing team dinners

# Chapter 5

## Summary, Conclusions, and Recommendations for Future Research

### Summary

The purpose of this study was to discover what female collegiate athletes find to be the most helpful verbal communications and non-verbal communications from their coaches with regard to disordered eating. In doing so, this study aimed to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects coaches have on their athletes when it comes to eating disorders, there was little to no research on what coaches do that is *helpful*. In defining these helpful behaviors, the purpose of this study was threefold:

1. To discover what female collegiate athletes find to be the most helpful verbal communications from their coaches with regard to disordered eating.
2. To discover what female collegiate athletes find to be the most helpful non-verbal communications from their coaches with regard to disordered eating.
3. To determine if any of these findings differ by type of sport.

Study participants consisted of 11 female collegiate athletes across eight different sports representing all three NCAA divisions. Each participant completed a preliminary survey in which they were asked demographic information, which coach had the most positive influence on them, eating disorder history among themselves, family members, or teammates, their motivation for training, any additional exercise they do, and information on weight, height, and calories consumed in season.

All 11 athletes then participated in an in-person or phone interview during which they were asked to discuss positive coach-athlete relationships, words and actions of happiness, confidence, motivation, and inspiration to be healthy, positive feedback, their mental needs as athletes, and what influenced their body image and eating habits (with specific regard to what coaches could do to promote healthy behaviors).

A result of these findings is best described by the central theme of strength which links two critical areas developed from the interview data: *Coach-Athlete Relationship* and *Athlete Eating Habits & Physique*. The theory developed through the study's grounded theory approach is as follows:

1. A *strong*, positive relationship must exist between the coach and athlete before the coach communicates anything regarding eating habits or physique of the athlete.
2. Once such a relationship is established, both verbal and non-verbal coach communications regarding athlete eating habits or physique should focus on *strength*.

The central theme of strength thus has a double meaning. With regard to theory part (1), strength refers to the relationship bond between the coach and athlete and is thus a mental meaning of strength. With regard to theory part (2), strength refers to the content of coach communications with regard to athlete eating habits and physique and is thus a physical definition of strength. Moreover, a necessary link exists between theory part one and theory part two, namely that a strong coach-athlete relationship must first exist before communication about athlete eating habits and physique can occur.

A strong, positive coach-athlete relationship is defined by the following 12 themes: Knowing the Athlete and Understanding Her Needs, Respect, Trust, Care, Acknowledgement, Approval, Connection, Encouragement, Compliments, Leading by Example, Not Just Winning, and Comfort. These general positive coach communications are also necessary components of specific coach communications regarding athlete eating habits and physique.

Both verbal and non-verbal coach communications regarding athlete eating habits and physique that exemplify strength are defined by the following categories: Positive Verbal Coach Communications Regarding Eating and Physique, Positive Non-Verbal Coach Communications Regarding Eating and Physique, Dining Halls, Communication with Others, Leading by Example, and Athlete Responsibility.

**Conclusions**

This study was comprised of the following three research questions:

1. What do female collegiate athletes believe are helpful verbal communications from their coaches with regard to disordered eating?
2. What do female collegiate athletes believe are helpful non-verbal communications from their coaches with regard to disordered eating?
3. Do the athletes' responses differ by type of sport?

After reviewing the data gathered in this study, including both the preliminary survey and interview data, the following conclusions were drawn:

1. Before specific verbal communications regarding disordered eating can be articulated effectively to female athletes, coaches should understand and be able to execute general positive verbal communications. These include showing respect and

trustworthiness, demonstrating acknowledgement and approval, connecting with athletes, and providing encouragement and compliments. Positive verbal coach communications with regard to athlete eating habits and physique include providing information on nutrition, educating athletes about recovery, talking about food as fuel, and stating potentially hurtful comments in a tactful manner. In addition, teaching one's athletes how to eat in a dining hall, as well as voicing their concerns to dining services can have a positive effect on an athlete's eating behaviors.

2. Before specific non-verbal communications regarding disordered eating can be articulated effectively to female athletes, coaches should understand and be able to execute general positive non-verbal communications. These include knowing one's athletes and demonstrating an understanding of their needs, showing respect, trustworthiness, and care, acknowledging and approving athletes' comments and actions, connecting with athletes through listening and approachability, leading by example, establishing a culture that is not solely based on winning, and making the athlete feel comfortable.

Positive non-verbal coach communications with regard to athlete eating habits and physique include providing information on nutrition via qualified professionals or handouts and summer packets, making recovery snacks available, giving the athletes a choice of food options on road trips, being a role model for athletes by showcasing healthy eating behaviors and a positive body image, and organizing team dinner. Furthermore, coaches can approach others (e.g., captains, athletic trainers, coaches, teammates) with a concern about an athlete with a possible eating disorder. Simultaneously, however, it is important that a coach realize that an athlete is also

responsible for her own actions and therefore, she might not wish to be involved in too much intervention.

3. In order to make as accurate a comparison as possible, this research only considered differences across cross country and track & field (XC/TF), lacrosse, and soccer since at least three interview participants are/were athletes in those sports (four participated in XC/TF, three participated in lacrosse, and three participated in soccer). While the majority of themes and categories analyzed in the interview data resulted in similar responses regardless of sport, answers *did* differ slightly among the four XC/TF athletes, the three lacrosse athletes, and the three soccer athletes in the following categories: Approval, Not Just Winning, and Athlete Responsibility. Results showed that XC/TF, lacrosse, and soccer athletes that take more responsibility for their own actions, thoughts, and training may be less likely to seek approval from a coach. To further support this argument, collective participant responses from the other sports did not reveal the same discrepancy. Interviewees who participated in basketball, fencing, field hockey, squash, and volleyball placed equal emphasis on Approval and Athlete Responsibility when talking about positive coach-athlete relationships. Therefore, among these respondents, there is no clear conclusion that suggests a coach's approval is less important if the athlete assumes more responsibility. Further inspection of the interview data revealed differences between basketball and lacrosse. According to some participants, it is "OK" to eat more and be "bigger" in basketball than it is in the "dainty" sport of lacrosse. Therefore, coaches should be aware of how they communicate the need to be "big" in "dainty" sports such as lacrosse.

**Recommendations for Future Research**

While these findings are valuable and do support the purpose of the study to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors, further research is warranted to develop the supporting information.

1. Both positive and negative effects from others (especially teammates) on disordered eating should be explored. This study should thus be replicated to learn about the potentially strong influence that others, aside from the coach, have on female collegiate athletes and their eating behaviors. Moreover, positive communications in which team members can engage should also be discovered.

2. Qualitative data collection could be expanded to include interviews with male athletes. While not the direct purpose of the research questions in this study, male athletes also suffer from disordered eating and may provide different answers than female athletes regarding positive coach communications.

3. While this research included 11 athletes across eight sports in all three NCAA divisions, comparisons across sports and divisions would be more compelling if additional athletes were recruited among the same sports and divisions.

4. An analysis of this study's purpose based on gender of the coach would be of interest, especially to discover if the same implications and findings exist for both male and female coaches.

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# APPENDIX A: CERTIFICATE FROM THE COLLABORATIVE INSTITUTIONAL TRAINING INITIATIVE and APPROVAL FROM THE INSTITUTIONAL REVIEW BOARD AT DREXEL UNIVERSITY

**CITI Collaborative Institutional Training Initiative**

**Social, Behavioral and Educational Research Investigators Curriculum Completion Report**

**Printed on 1/9/2013**
**Learner:** Rachel Sandler (username: TrackR260)
**Institution:** Drexel University College of Medicine
**Contact Information** Department: Sport Management
Email: rs869@drexel.edu

**Social, Behavioral and Educational Research Investigators:**

**Stage 1. Basic Course Passed on 01/09/13** (Ref # 9437227)

| Required Modules | Date Completed | Score |
|---|---|---|
| Belmont Report and CITI Course Introduction | 01/08/13 | 3/3 (100%) |
| Students in Research | 01/08/13 | 10/10 (100%) |
| History and Ethical Principles - SBR | 01/08/13 | 4/5 (80%) |
| Defining Research with Human Subjects - SBR | 01/08/13 | 5/5 (100%) |
| The Regulations and The Social and Behavioral Sciences - SBR | 01/08/13 | 5/5 (100%) |
| Assessing Risk in Social and Behavioral Sciences - SBR | 01/08/13 | 4/5 (80%) |
| Informed Consent - SBR | 01/08/13 | 5/5 (100%) |
| Privacy and Confidentiality - SBR | 01/08/13 | 4/5 (80%) |
| Research with Children - SBR | 01/08/13 | 4/4 (100%) |
| Internet Research - SBR | 01/08/13 | 5/5 (100%) |
| Research and HIPAA Privacy Protections | 01/08/13 | 4/5 (80%) |
| Conflicts of Interest in Research Involving Human Subjects | 01/09/13 | 4/5 (80%) |
| Drexel University College of Medicine Courses | 01/09/13 | no quiz |

**For this Completion Report to be valid, the learner listed above must be affiliated with a CITI participating institution. Falsified information and unauthorized use of the CITI course site is unethical, and may be considered scientific misconduct by your institution.**

Paul Braunschweiger Ph.D.
Professor, University of Miami
Director Office of Research Education
CITI Course Coordinator

https://www.citiprogram.org/members/learnersII/crbystage.asp?strKeyID=E2D7C0A8-8956-4955-A84F-B59466544D76-14056725&gradebook=33237

Drexel UNIVERSITY
Office of Human Research

APPROVAL OF PROTOCOL

May 31, 2013

Amy Giddings, Ph.D.
Goodwin School of Professional Studies
Mailstop: Drexel University

Dear Dr. Giddings,

On May 28, 2013 the IRB reviewed the following protocol:

| | |
|---|---|
| Type of Review: | Initial |
| Title: | Disordered Eating Among Female Collegiate Athletes: Positive Behavior Strategies for Coaches |
| Investigator: | Amy Giddings, Ph.D. |
| IRB ID: | 1303001966 |
| Funding: | Internal |
| Grant Title: | None |
| Grant ID: | None |
| IND, IDE or HDE: | None |
| Documents Reviewed: | Application Form, Contact Form, Conflict of Interest, Template Protocol, Data Collection Tools, Proposal, Consent Form, Flyers and Advertisements |

According to 45 CFR 46.110, this study is Approved Expedited Categories 6 and 7. This study will enroll 10 NCAA athletes and former athletes recruited from social media and the general public to complete interviews.

The IRB approved the protocol from May 28, 2013 to May 27, 2014 inclusive. Before May 27, 2014 or within 30 days of study close, whichever is earlier, you are to submit a completed Continuing Review Progress Report and required attachments to request continuing approval or closure.

If continuing review approval is not granted before the expiration date of May 27, 2014 approval of this protocol expires on that date.

Attached are stamped approved consent documents. Use copies of these documents to document consent.


1601 Cherry Street, 3 Parkway Building, Suite 10444, Philadelphia, PA 19102 | Tel: 215.255.7837 | Fax: 215.255.7976
research.drexel.edu/compliance | orrc@drexel.edu

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL.

Sincerely,

Danyelle S. Gibson

# APPENDIX B: E-MAIL NOTIFICATION OF THE STUDY AND REQUEST FOR PARTICIPANTS

Dear [Coach, Athletic Trainer, Athletics Administrator; *researcher used actual names since this e-mail went to personal contacts*],

I am a master's student of Sport Management at Drexel University and am collecting data for my thesis. I am exploring positive coach behaviors with regard to disordered eating among female collegiate athletes. While there are numerous studies on the detrimental effects that coaches have on their athletes when it comes to eating disorders, there is little to no research on what coaches do that is *helpful*. In order to discover positive coach communication tactics, I plan to interview both current and former **female collegiate** athletes across all NCAA divisions. The more participants I get, the more meaningful the data and subsequent results will be.

I am asking you to assist me in recruiting either current or former **female collegiate** athletes that would be interested in participating in my study. They do not have to have a history or current diagnosis of an eating disorder, only that they participate(d) in college sports. The interviews should last approximately an hour and will take place in a private conference room at either the participant's or researcher's college or university (phone is an option for those out of the area). I would appreciate it if you could forward this e-mail to all of your athletes. For those that are interested in participating, please have them contact me directly. Questions can be brought to my attention via e-mail or mobile phone at the contact information provided below. **Participation is 100% voluntary**.

I appreciate your support of this project and to thank you for your assistance, I will send you a copy of my results. **My goal is to begin the interview process as soon as possible**.

Thank you for your consideration.

Regards,
Rachel Sandler, M.S. candidate
rs869@drexel.edu
215-880-4922 (cell)

# APPENDIX C: SOCIAL MEDIA BLASTS

To Researcher's LinkedIn groups, main LinkedIn page, and Facebook

Do you know any current or former female collegiate athletes who would be interested in participating in an interview for my master's thesis? I am exploring positive coach communications with regard to disordered eating. Most of the literature tells coaches what they do wrong, but I want to explore what coaches do that is helpful! Help me help athletes by recruiting female participants for this important study. They do not have to have a history or current diagnosis of an eating disorder, only that they participate(d) in college sports. Participation is 100% voluntary. I can be reached at rs869@drexel.edu. Thank you!

To Twitter (limited to 140 characters):

Looking for female collegiate athletes to interview for study on positive coach behaviors and disordered eating. Contact rs869@drexel.edu.

# APPENDIX D: CONTACT LIST

## RESEARCHER'S PERSONAL PROFESSIONAL CONTACTS

| Institution | NCAA Division | Position | City, State |
|---|---|---|---|
| Bryn Mawr College | III | Coaches and Athletics Administrators | Bryn Mawr, PA |
| Cabrini College | III | Coach | Radnor, PA |
| Case Western Reserve | III | Coach | Cleveland, OH |
| Central High School | HS | Former Coach | Philadelphia, PA |
| Columbia University | I | Athletics Administrator | New York, NY |
| Delware Valley College | III | Coach | Doylestown, PA |
| Dickinson College | III | Coach | Carlisle, PA |
| Drexel University | I | Coach, Athletics Administrator, Program Manager, Professors | Philadelphia, PA |
| Haverford College | III | Coaches and Athletics Administrators | Haverford, PA |
| Humboldt State University | II | Coach | Arcata, CA |
| Messiah College | III | Coach | Mechanicsburg, PA |
| Mount Holyoke | III | Coach | South Hadley, MA |
| Penn State Abington | III | Coaches | Abington, PA |
| Philadelphia University | II | Coach | Philadelphia, PA |
| Saint Mary's College | I | Coach | Notre Dame, IN |
| Smith College | III | Coach | Northampton, MA |
| Southern Connecticut State University | II | Coach | New Haven, CT |
| Swarthmore College | III | Coach | Swarthmore, PA |
| University of Pennsylvania | I | Coach | Philadelphia, PA |
| University of the Sciences | II | Coach | Philadelphia, PA |
| Wellesley College | III | Coach | Wellesley, MA |
| Widener University | III | Coach | Chester, PA |
| Yale University | I | Coach | New Haven, CT |

## RESEARCHER'S LinkedIn GROUPS

- Drexel University Sport Management
- Goodwin College of Professional Studies at Drexel University
- Greater Philadelphia Sports Professionals Association
- Haverford & Bryn Mawr Bi-College Alumni
- Haverford College Alumni Group
- Haverford College Worldwide Alumni
- Institute for Sport Coaching
- Intercollegiate Athletic Administrators
- NACDA
- National Association of Collegiate Women Athletics Administrators
- The Alliance of Women Coaches
- Track and Field Coaches
- USATF (U.S.A. Track & Field)
- WISC Network (Women In Sports Careers)
- Women Talk Sports

# APPENDIX E: CONSENT FORM

**Drexel University**
**Consent to Take Part**
**In a Research Study**

***1. Title of research study:*** Disordered Eating Among Female Collegiate Athletes: Positive Behavior Strategies for Coaches

***2. Researcher:*** Rachel Sandler

***3. Why you are being invited to take part in a research study:***
We invite you to take part in this research study because you are a current or former female collegiate athlete who expressed interest in being interviewed on positive coaching behaviors and disordered eating.

***4. What you should know about a research study:***
- Someone will explain this research study to you.
- Whether or not you take part is up to you.
- You can choose not to take part.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

***5. Who can I talk to?***
If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at Goodwin College of Professional Studies at Drexel University, 3001 Market Street, Philadelphia, PA, 19104. The researcher, Rachel Sandler, can be reached via e-mail at rs869@drexel.edu or by mobile phone at 215-880-4922.

This research has been reviewed and approved by an Institutional Review Board. You may talk to them at (215) 255-7857 or email HRPP@drexel.edu for any of the following:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

***6. Why are we doing this research?***
We are exploring positive coach behaviors with regard to disordered eating among female collegiate athletes. While there are numerous studies on the detrimental effects that coaches have on their athletes when it comes to eating disorders, there is little to no research on what coaches do that is helpful. To help us gain further insights into this area we will ask you to complete a short questionnaire followed by an in-depth interview.

***7. How long will the research last?***
We expect that you will be in this research study for an hour on the scheduled day of the interview (in May 2013).

***8. How many people will be studied?***
Our goal is to recruit 10 participants for this study.

***9. What happens if I say yes, I want to be in this research?***
Upon your agreement to participate in the study, we will schedule an interview (for some time in May 2013) at the time and venue of your choice (phone is also an option). You will be asked to sign this consent form along with a permission form to be audiotaped.

On the day of the interview, you will complete a brief demographic questionnaire followed by the in-depth interview. You will only be interacting with the researcher, Rachel Sandler (neither the principal investigator nor your coaches will be present at any time during this study). Your participation will not go beyond the one day of your interview.

***10. What happens if I do not want to be in this research?***
You may decide not to take part in the research and it will not be held against you. Participation is 100% voluntary and in no way will your participation, or lack thereof, affect your relationship with your coach (your coach will not even know you are participating).

***11. What happens if I say yes, but I change my mind later?***
You can agree to take part in the research now and stop at any time; it will not be held against you. Furthermore, aside from the researcher, no one else will know that you made this decision.

***12. Is there any way being in this study could be bad for me?***
Some of the information you are asked to provide may be sensitive in nature. While the probability and magnitude are low, this study might pose minor psychological risks if the recall of past experiences (e.g., suffering from disordered eating) is challenging and difficult for you.

Please refer to the list of resources at the end of the preliminary survey. Also, please keep in mind that you are not obligated to answer every question or to discuss things that you don't wish to talk about. Moreover, the researcher will check in with you if you seem upset, provide referral phone numbers for therapists, and receive supervision and consultation by a trained professional with whom she will have regular bi-weekly consultations to receive appropriate guidance about handling emotional sensitivity and concern about disordered eating.

***13. Do I have to pay for anything while I am in this study?***
There is no cost to you for participating in this study.

***14. Will being in this study help me in any way?***
There may be no benefit. Our goal is to better understand the behavior of coaches and how it can be related to disordered eating. Ultimately, we hope to use this data to share with coaches so that they can become aware of these findings to help prevent disordered eating.

***15. What happens to the information we collect?***
Efforts will be made to limit your personal information, including research study records, to people who have a need to review this information. We cannot promise complete privacy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization.

***16. What else do I need to know?***
This research study is being done by Drexel University.
Federal law provides additional protections of your personal information that are described here.

***A. Individually Identifiable Information That Will Be Collected***
The following personal information about you will be collected and used during the research study and may be given out to others:

- Personal and family medical history with regard to eating disorders.
- Information learned during the questionnaire and interview done as part of this research study.
- Your name, e-mail address, college or university that you attend(ed), and sports you play(ed).
- This information will be stored on the researcher's password-protected hard drive and deleted after the study is complete. Data from hard copies of completed preliminary surveys will be entered into Excel and saved on the researcher's password-protected hard drive. The hard copies will then be securely shredded.
- Interview data (hard copies of transcripts) will be stored in the PI's (Dr. Amy Giddings) locked file cabinet in her office (electronic files will all be deleted once the hard copies are printed).
- The interview recordings will be sent to a professional transcriber who will be the only one to hear the data. She has much experience transcribing interviews for research studies of this nature and has agreed to confidentiality and to delete all recordings from her computer once she sends the researcher the completed transcript. The researcher will also delete all recordings from her iPhone as soon as she receives the completed transcript.
- All data will be deleted after the study is over and the thesis is complete.

***B. Who Will See and Use Your Health Information within Drexel University***
The researcher and other authorized individuals involved in the research study at Drexel University will see your health information and may give out your health information during the research study. These include the researcher and the research staff, the institutional review board and their staff, legal counsel, research office and compliance staff, officers of the organization and other people who need to see the information in

order to conduct the research study or make sure it is being done properly. Your health information may be disclosed or transmitted electronically.

***C. If you do not want to give authorization to use your health information***
You do not have to give your authorization to use or give out your health information. You can simply refuse to answer these personal questions on the preliminary survey.

***D. How to cancel your authorization***
At any time you may cancel your authorization to allow your health information to be used or given out by sending a written notice to Human Research Protection at 1601 Cherry Street, 3 Parkway Bldg., Mail Stop 10-444, Philadelphia, Pennsylvania, 19102. If you leave this research study, no new health information about you will be gathered after you leave. However, information gathered before that date may be used or given out if it is needed for the research study or any follow-up.

***E. When your authorization ends***
Your authorization to use and give out your health information will end when the research study is finished.

***F. Your right to inspect your research records***
You have the right to look at your research records at any time during this research study.

Your signature documents your permission to take part in this research.

**DO NOT SIGN THIS FORM AFTER THIS DATE** → 

| | |
|---|---|
| Signature of subject | Date |
| Printed name of subject | |
| Signature of person obtaining consent | Date |
| Printed name of person obtaining consent | Form Date |

# APPENDIX F: PERMISSION TO AUDIOTAPE

# Permission to Audiotape

**Investigator's Name**: Rachel Sandler, M.S. candidate
**Department**: Sport Management
**Project Title**: Disordered Eating Among Female Collegiate Athletes: Positive Behavior Strategies for Coaches

Participant:
Date:

I give Rachel Sandler permission to audiotape me. This audiotape will be used only for the following purpose(s):

RESEARCH
This audiotape will be used as a part of a research project at Drexel University. I have already given written consent for my participation in this research project. At no time will my name be used.

WHEN WILL I BE AUDIOTAPED?
I agree to be audiotaped on _____ (date) during the time period:___ to____ .

FOR HOW LONG WILL THE TAPES BE USED?
I give my permission for these tapes to be used from May 2013 through May 2016.

Data will be stored for up to three (3) years after completion of the study.

WHAT IF I CHANGE MY MIND?
I understand that I can withdraw my permission at any time. Upon my request, the audiotape(s) will no longer be used. This will not affect my care or relationship with Rachel Sandler or with Drexel University in any way.

OTHER
I understand that I will not be paid for being audiotaped or for the use of the audiotapes.

FOR FURTHER INFORMATION
If I want more information about the audiotape(s), or if I have questions or concerns at any time, I can contact: Rachel Sandler, rs869@drexel.edu, 215-880-4922.

Please print

Subject's Name:

Date:

Address:

Phone:

_____

Subject's Signature Date

_____

Witness Signature Date

---

Investigator's Name: Rachel Sandler

Department: Sport Management

Institution: Drexel University

Street Address: 125 N. 4th Street Apartment 310

City: Philadelphia State: PA Zip Code: 19106

Phone: 215-880-4922

This form will be placed in my records.

# APPENDIX G: PRELIMINARY SURVEY AND ONLINE RESOURCES

Thank you for your participation in this study. Below is a brief questionnaire to complete before we get started with the interview. The purpose of this study is to gain insight into and understanding of the helpful behaviors in which coaches engage that promote healthy – as opposed to disordered – eating behaviors. While there are numerous studies on the detrimental effects that coaches have on their athletes when it comes to eating disorders, there is little to no research on what coaches do that is *helpful*.

Your participation is greatly appreciated!

I only ask that you complete this brief questionnaire to the best of your ability. Some of the questions may be sensitive in nature; therefore, please feel free to omit any questions that make you uncomfortable. **Participation in this study is 100% voluntary and all of your responses will be kept confidential**.

1. Age:_____
2. Sport(s):_____
3. NCAA Division:
    a. Division I____
    b. Division II___
    c. Division III___
4. Total experience with this sport (over your lifetime):
    a. 1-4 years_____
    b. 5-7 years_____
    c. 8-10 years_____
    d. 11-13 years_____
    e. 14+ years_____
5. Please describe the coach who has (had) the most positive influence on you (*note: you will answer all questions in the interview with this coach in mind*); please circle one in each underlined category.
    a. <u>Type of Coach</u>
        i. Head Coach
        ii. Assistant Coach
        iii. Strength and Conditioning Coach
        iv. Other
    b. <u>Age of Coach</u>
        i. 20-29
        ii. 30-39
        iii. 40-49
        iv. 50+
    c. <u>Gender of Coach</u>
        i. Male
        ii. Female
6. Have you ever been diagnosed with an eating disorder?
    a. No___
    b. Yes___
    c. If yes, which one?

   i. Anorexia_____
   ii. Bulimia_____
   iii. Other_____
7. Have any of your family members been diagnosed with an eating disorder?
   a. No___
   b. Yes__
   c. If yes, which one?
      i. Anorexia_____
      ii. Bulimia_____
      iii. Other_____
8. Have any of your teammates been diagnosed with an eating disorder?
   a. No___
   b. Yes__
   c. If yes, which one?
      i. Anorexia_____
      ii. Bulimia_____
      iii. Other_____
9. Is (was) your training primarily for winning?
   a. Yes__
   b. No___
10. Is (was) your training primarily for improving skills?
   a. Yes__
   b. No___
11. How often do (did) you exercise outside of your sport's requirements?
   a. Never_____
   b. 1-2 days/week_____
   c. 3-5 days/week_____
   d. 6-7 days/week_____
12. If you exercise(d) outside of your sport's requirements, for how long do (did) you exercise during each session?
   a. Less than an hour_____
   b. 2-3 hours_____
   c. 4-5 hours_____
   d. 6+ hours_____
13. About how many calories do (did) you consume per day while in season?
   a. Less than 1,000_____
   b. 1,000-1,999_____
   c. 2,000-2,999_____
   d. Greater than 3,000_____
14. About how tall are you?
15. About how much do you weigh?
16. If you are a former athlete, about how much did you weigh when competing in college?

**Online Resources**

- Academy for Eating Disorders (AED) www.aedweb.org
- American Psychology Association www.apa.org
- American Psychiatric Association www.psych.org
- Anorexia Nervosa and Related Eating Disorders, Inc. www.anred.com
- Body Positive www.bodypositive.com
- Caringonline www.caringonline.com
- Center for Change www.centerforchange.com
- Council on Size and Weight Discrimination www.cswd.org
- Eating Disorders Anonymous www.eatingdisordersanonymous.org
- Eating Disorder Referral and Information Center www.edreferral.com
- Eating Disorder Resources www.bulimia.com
- Harvard Eating Disorders Center www.hedc.org
- International Association of Eating Disorder Professionals www.iaedp.com
- Love Your Body Project, NOW Foundation www.now.org/foundation/health/whp
- Massachusetts Eating Disorder Association (MEDA) www.medainc.org
- Media Influence on Body www.about-face.org
- National Association of Anorexia Nervosa and Associated Disorders www.anad.org
- National Eating Disorders Association www.nationaleatingdisorders.org
- Overeaters Anonymous (OA) www.oa.org
- The Renfrew Center Foundation www.renfrew.org
- Something Fishy www.something-fishy.org

# APPENDIX H: PERMISSION TO USE PREVIOUSLY DESIGNED DEMOGRAPHIC PORTION OF COKER'S (2001) INSTRUMENT

Rachel,

Sure, that would be fine. I'm really interested in your results--this sounds like an incredibly important study! When you wrap it up, if you don't mind sharing, I'd love to know what you found. Best of luck. Let me know if I can be of any further assistance.

Ashley

Ashley Cranney
Graduate Teaching Assistant
Sport and Exercise Psychology
West Virginia University
Performance Psychology Committee Member, AASP
amcranney@gmail.com

**********

Dear Ashley,

As discussed, I decided to take my research into a slightly different direction than I initially intended when I first contacted you. I am exploring positive coach behaviors with regard to disordered eating among female collegiate athletes. While there are numerous studies on the detrimental effects that coaches have on their athletes when it comes to eating disorders, there is little to no research on what coaches do *right*. In order to discover positive coach communication tactics, I plan to interview both current and former female collegiate athletes across all NCAA divisions.

Before I begin each interview, I am going to request that my participants complete a brief survey. I was wondering, therefore, if I could adapt this portion of my study from the questions you used in your questionnaire (but I would only be pulling from the first section entitled “Background Information”).

Please let me know if you grant me permission for the use of this portion of your questionnaire. I can be reached at rs869@drexel.edu or on my cell at 215-880-4922.

Thank you for your consideration.

Regards,
Rachel Sandler, M.S. candidate
rs869@drexel.edu
215-880-4922 (cell)

# APPENDIX I: INTERVIEW GUIDE

Actually, before we even begin with introductions, do I have your permission to record our conversation?

Okay, great! Thank you for agreeing to do this! My name is Rachel and I am a master's student at Drexel University in the Sport Management program. I am completing this interview as a part of my thesis research and I really appreciate your participation. You can be assured that your responses will be kept confidential. THIS IS A SAFE SPACE AND ANYTHING YOU SAY OR FEEL IS VALID.

First, to get started, I'd like you to complete this brief questionnaire and sign the permission form to be audiotaped.

Okay, thank you. So now I'd like you to consider the coach you identified in question #5 on that survey throughout the interview.

<u>Current Student-Athlete Guide</u>

1. Why does the coach you indicated on the survey in question #5 have a positive influence on you?
2. In general, what *words* make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy?
    a. Does your coach use those words?
        i. If not, would you prefer him/her to?
            1. If no, why?
3. In general, what *actions* of other people make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy? This can be anything from a high five to a pat on the back, etc.
    a. Does your coach perform those actions?
        i. If not, would you prefer him/her to?
            1. If no, why?
4. What does a positive coach-athlete relationship mean to you?
    a. Do you experience any of these aspects with your coach?
        i. If not, do you wish your relationship with your coach was more like the one you just described?
5. What do you feel constitutes positive feedback?
    a. Does your coach provide you with this type of feedback?
        i. If not, would you like him/her to?
6. What are your mental needs as an athlete?
    a. Are these needs being met?
        i. If yes, how?
        ii. If no, how do you prefer them to be met?
7. Would you say that you have a healthy body image?
    a. If yes, does your coach influence that answer?
        i. If yes, how?
        ii. If no, how *could* your coach influence that answer?

   b. If no, does your coach influence that answer?
      i. If yes, what do you wish he/she did to promote a healthy body image?
8. On a typical day on which you have practice, what is your optimal meal plan? Think about your ideal breakfast, lunch, and dinner, as well as pre- and post-practice snacks.
   a. How close is this ideal to your reality? Why? What does or does not influence your actual food choices?
9. Does your coach offer nutritional guidelines or talk about nutrition?
   a. If yes, do you find this information helpful?
      i. If helpful, what does the information include?
      ii. If not helpful:
         1. Do you wish that no information was given at all?
         2. Do you wish the information was different? What would it communicate?
   b. If no, do you wish your coach did?
      i. If yes, what type of information would you want to receive?
      ii. If no, why not?
10. With your ideal meal plan in mind:
   a. Does your coach influence your eating behaviors? How?
   b. Do you eat differently *in front of* this coach? Why?
   c. Do you eat differently in general *because of* this coach? Why?
   d. [If answers are negative, ask what she prefers instead]
11. Who decides where to eat on road trips?
   a. How does this affect your eating behaviors (recall the ideal meal plan we just discussed)?
   b. [If answers are negative, ask what she prefers instead]
12. How do you feel about the options of food for you on road trips and the food that's available before and after competitions?
   a. How does this affect your eating behaviors?
   b. [If answers are negative, ask what she prefers instead]
13. Does seeing what your coach eats affect your own food choices?
   a. If yes, how?
      i. Is it a positive or negative effect?
         1. If negative, what would you prefer your coach do instead?
14. Do you think your coach has a healthy relationship with his/her body? How do you come to these conclusions?

<u>Former Student-Athlete Guide</u>

1. Why did the coach you indicated on the survey in question #5 have a positive influence on you?
2. In general, what *words* make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy?
   a. Did your coach use those words?

        i. If not, would you have preferred him/her to?
            1. If no, why?
3. In general, what *actions* of other people make you happy, instill confidence, motivate you to perform well, and inspire you to be healthy? This can be anything from a high five to a pat on the back, etc.
    a. Did your coach perform those actions?
        i. If not, would you have preferred him/her to?
            1. If no, why?
4. What does a positive coach-athlete relationship mean to you?
    a. Did you experience any of these aspects with your coach?
        i. If not, do you wish your relationship with your coach was more like the one you just described?
5. What do you feel constitutes positive feedback?
    a. Did your coach provide you with this type of feedback?
        i. If not, would you have liked him/her to?
6. What were your mental needs as an athlete?
    a. Were those needs met?
        i. If yes, how?
        ii. If no, how would you have preferred them to be met?
7. Would you say that you had a healthy body image in college?
    a. If yes, did your coach influence that answer?
        i. If yes, how?
        ii. If no, how *could* have your coach influenced that answer?
    b. If no, did your coach influence that answer?
        i. If yes, what do you wish he/she did to promote a healthy body image?
8. On a typical day on which you had practice, what was your optimal meal plan? Think about your ideal breakfast, lunch, and dinner, as well as pre- and post-practice snacks.
    a. How close was this ideal to your reality? Why? What did or did not influence your actual food choices?
9. Did your coach offer nutritional guidelines or talk about nutrition?
    a. If yes, did you find this information helpful?
        i. If helpful, what did the information include?
        ii. If not helpful:
            1. Do you wish that no information was given at all?
            2. Do you wish the information was different? What would it have communicated?
    b. If no, do you wish your coach did?
        i. If yes, what type of information would you have wanted to receive?
        ii. If no, why not?
10. With your ideal meal plan in mind:
    a. Did your coach influence your eating behaviors? How?
    b. Did you eat differently *in front of* this coach? Why?

    c. Did you eat differently in general *because of* this coach? Why?
    d. [If answers are negative, ask what she would have preferred instead]
11. Who decided where to eat on road trips?
    a. How did this affect your eating behaviors (recall the ideal meal plan we just discussed)?
    b. [If answers are negative, ask what she would have preferred instead]
12. How did you feel about the options of food for you on road trips and the food that was available before and after competitions?
    a. How did this affect your eating behaviors?
    b. [If answers are negative, ask what she would have preferred instead]
13. Did seeing what your coach ate affect your own food choices?
    a. If yes, how?
        i. Was it a positive or negative effect?
            1. If negative, what would you have preferred your coach do instead?
14. Do you think your coach had a healthy relationship with his/her body? How did you come to these conclusions?